INSTITUTIONAL OWNERS AND COMPETITIVE RIVALRY

A Dissertation

by

BRIAN L. CONNELLY

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2008

Major Subject: Management

INSTITUTIONAL OWNERS AND COMPETITIVE RIVALRY

A Dissertation

by

BRIAN L. CONNELLY

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Approved by:

Chair of Committee,	Laszlo Tihanyi
Committee Members,	Leonard Berry
	S. Trevis Certo
	Michael A. Hitt
Head of Department,	Murray Barrick

August 2008

Major Subject: Management

ABSTRACT

Institutional Owners and Competitive Rivalry. (August 2008)

Brian L. Connelly, B.S., Rutgers University;

M.S., Johns Hopkins University;

M.B.A., Indiana University

Chair of Advisory Committee: Dr. Laszlo Tihanyi

Scholars have increasingly recognized the importance of institutional owners in the life of the firm and have sought to explain how and when these owners influence firm-level strategies. In spite of evidence that these owners can and do affect broad strategies, there is little empirical support for the extent to which institutional investors involve themselves at the level of strategic competitive actions that firms undertake. This raises the question: "How do different types of institutional investors affect strategic competitive activity between firms?" Further, owners have a unique bearing on competitive activity insofar as they can simultaneously influence firms that are competing with each other. Therefore another important question is: "How are the relationships between institutional investors and strategic competitive activity affected when those investors hold stakes in both the focal firm and their competitor?"

Borrowing from the accounting literature, this dissertation classifies institutional owners into three groups based on their historical trading behavior: transient, dedicated, and quasi-indexer. Findings from examination of the ownership holdings and strategic competitive activity of thirty-six Fortune 500 rivalries over the years 1997-2006 provide

insight into these questions. High levels of dedicated institutional ownership are associated with greater strategic competitive activity whereas high transient institutional ownership is associated with low strategic competitive activity. The relationship between dedicated ownership and strategic competitive activity is moderated by common ownership of a focal firm and its rival. As dedicated ownership of the focal firm and its rival increase together, strategic competitive activity is reduced. The results presented here change the way we apply agency theory to explain firm governance. For competitive dynamics researchers, this study points to a previously unexplored means by which firms are motivated to engage, or not engage, in competitive activity. This study also has broad implications for managers, investors, and policymakers.

DEDICATION

To Cora, who supported and encouraged me every step of the way. Thank you for making this possible. Also to Joshua, Heather, Kaitlin, and Jessica, the most wonderful group of children a dad could ask for. We could not have accomplished this without you.

ACKNOWLEDGMENTS

Laszlo, I am deeply indebted. You were all that a doctoral student could wish for in a dissertation chair. You have a remarkable ability to be a guide and mentor while at the same time gently pushing out of the nest. You have taught me how to do research and introduced me to a host of interesting ideas, thus enabling this dissertation and launching my career. Thank you for making this work so enjoyable.

Trevis, you have been both a role model and a friend. Thank you for all you have meant to me and my family during this process. Mike, in a world full of people saying *you can't*, yours is a strong voice of encouragement. Thank you for believing in me and sharing your expertise on so many occasions, imparting invaluable tacit knowledge. Len, you are wise and caring. Thank you for lending your expertise to this dissertation and to my doctoral program experience.

Thank you also to the faculty of Texas A&M University's Management Department. It is truly an unusual place with a vast collection of scholars that are both talented and wonderful people. I benefited from your expertise on many occasions, beginning with the early stages of this dissertation. I also greatly value my colleagues in the doctoral program, with whom I formed lasting friendships.

Finally, thank you Memère, Oma, and Opa. You are the most important people in our lives. Your love, support and encouragement enables us to accomplish great things. Thank you too, Dad, I know how proud you would be if you were here.

TABLE OF CONTENTS

CHAPTER Page

LIST OF TABLES

Page

CHAPTER I

INTRODUCTION

Firms exist in a competitive environment. Over the past two decades, researchers have directed attention to the specific moves and countermoves made by competitors within industries as they maneuver for advantageous market position (Chen & Macmillan, 1992; 1985). Studies show that competitive behavior has important implications for firm performance. For example, aggressive firms may gain market share from less competitively aggressive firms (Chen & Macmillan, 1992). At the same time, competitive aggressiveness holds the potential of reducing long-term profitability for all firms in an industry (Gimeno & Woo, 1999). Understanding the circumstances that intensify or deter competitiveness in an industry is, therefore, important to managers and their firms.

Research has shed light on a number of determinants of firm competitive action. For example, the competitive aggressiveness of firms is driven, in part, by market structure (Chen, 1996), top management team (TMT) tendencies (Hambrick, Cho, & Chen, 1996), and various organizational characteristics (Ferrier, 2001). Competitive dynamics research suggests three behavioral drivers influence a firm's decision to act competitively: awareness, motivation, and capability (Chen, 1996; Chen, Su, & Tsai, 2007). Predictive theory of competitive behavior has mainly examined factors that make firms increasingly aware of competitive behavior (e.g., TMT heterogeneity and

---

This dissertation follows the style of the *Academy of Management Journal*.

multimarket competition) and increasingly capable of initiating competitive behavior (e.g., past performance and financial slack) (Ferrier, 2001). These studies have yielded valuable insights, but have led to an emphasis on environmental and organizational explanations of firm competitive strategy (Smith, Ferrier, & Ndofor, 2001). Scholars have devoted less attention to motivation.

Motivation "accounts for the incentives that drive a firm to undertake action" (Smith et al., 2001: 320). Competitive dynamics literature has looked primarily at external factors to describe a firm's motivation to compete or not compete (Ferrier, Smith, & Grimm, 1999; Mas-Ruiz, Nicolau-Gonzalbez, & Ruiz-Moreno, 2005). For example, Chen's (1996) theoretical integration of competitor analysis and interfirm rivalry describes how market commonality influences a firm's motivation to compete. Higher market commonality between rival firms reduces the extent to which firms initiate competitive actions (Gimeno, 1999). At the same time, when a rival engages in competitive activity, it motivates the focal firm to do the same (Chen, 1996). For this reason, some have used attack volume, as defined by Ferrier (2001), as a proxy for motivation to engage in competitive activity (e.g., Chen et al., 2007). Others have begun to suggest there may be internal factors that also incent managers to compete, such as executive compensation (Offstein & Gnyawali, 2005) and internal reward systems (Golden & Ma, 2003). However, the literature has not yet incorporated the influence of corporate governance structures on a firm's motivation to compete.

One form of governance that may be an important motivating, or de-motivating, influence on competition between firms is firm ownership. Investors buy shares in firm stock with the goal of accomplishing particular financial objectives. To ensure that firms

pursue goals that are consistent with those objectives, research suggests that owners take an active interest in the strategies firms adopt (e.g., David, Hitt, & Gimeno, 2001; Ramaswamy, Li, & Veliyath, 2002). Some owners desire their firms to take actions that provide immediate gains, others prefer actions that generate new growth opportunities (Hoskisson, Hitt, Johnson, & Grossman, 2002), and still others may be so broadly invested that they desire to see all firms in an industry succeed. Owners, therefore, are likely to be interested in the way that firms in their portfolio compete with each another. Their interests may not be the same as those of managers or directors, because owners are concerned not only with competitiveness of the firm, but also with competitiveness of a selection of firms.

One set of owners that has captured significant scholarly attention, owing to their influence over firms and firm strategies, is institutional owners (David et al., 2001). About 75% of NYSE trading equity is held by institutional investors (Dalton, Hitt, Certo, & Dalton, 2008). From an agency perspective, researchers have argued they are better monitors than other investors because they have access to better information and more resources at their disposal (Grinstein & Michaely, 2005). A number of studies have indicated there are important differences between types of institutional investors, and these differences explain the way that institutional investors affect firm strategies (Hoskisson et al., 2002; Tihanyi, Johnson, Hoskisson, & Hitt, 2003). Therefore, this dissertation asks, "how do different types of institutional investors affect competitive activity between firms?" Further, owners have a unique bearing on competitive activity insofar as they can simultaneously influence firms that are competing with each other. This raises another important question: "how are the relationships between institutional

investor types and competitive activity affected when institutional investors hold stakes in both the focal firm and their competitor?"

This dissertation unfolds in four parts. The first is a conceptual development that lays the groundwork for theory building. It begins with identification of gaps in competitive dynamics research, including a lack of research examining the influence of governance mechanisms. This is followed by a brief review of agency theory and discussion of how institutional investors govern firm actions using agency theoretic devices of exit, voice, and loyalty. This includes discussion of how the classification of institutional investors has progressed in both the management and accounting literatures, and how these classifications are important to firm strategies. This leads to the next section, hypothesis development, which builds on the conceptual development. I put forward specific postulates about how one particular classification of institutional investors, based on their trading behavior, describes how institutional investors use different agency mechanisms to incent or restrict competitive activity. I also develop hypotheses for situations where particular types of institutional investors own stakes in both a focal firm and its main competitor.

The next two sections describe how to measure the hypotheses using a sample of large U.S. firms and discuss results of the analysis. The data used in this study span across 10 years and 36 industries to capture the influence of different types of institutional investors on firm competitive activity. Some clear trends emerge. Perhaps most importantly, this study shows that institutional investors can and do involve themselves in the life of firms in which they invest. Interest in the competitive activity of firms depends on the type of institutional investor; some encourage competition while

others appear to discourage it. More so, these relationships can change when institutional owners maintain significant holdings of both firms in a competitive rivalry. Analyzing these relationships in a variety of ways (i.e., random effects, fixed effects, and multilevel modeling) and with different operationalizations (i.e. two different operationalizations of the dependent variable) yielded robust results. This study could have far-reaching implications, so the dissertation ends with discussion of how these results add to what we know about governance and competitive dynamics and also considers what this means for managers and public policy.

CHAPTER II

CONCEPTUAL DEVELOPMENT

Competitive Dynamics

Competitive dynamics is the study of firm actions and reactions (Ketchen, Snow, & Hoover, 2004). The ideas underlying competitive dynamics originated with Schumpeter (1934) who described the market process of competition wherein the creative actions of challengers whittle away at (i.e., attempt to destroy) a leader's position. Commonly known as "creative destruction," the goal of these competitive moves and countermoves was to sabotage the profits of rival firms or even threaten their very survival. Empirical research began in the late 1980s when scholars began to examine the interplay and consequences of product moves and countermoves as firms jockey for position in the marketplace (e.g., Bettis & Weeks, 1987; Macmillan, McCaffery, & Vanwijk, 1985).

The real emergence of this literature, though, came about in the 1990s when researchers found that competitive behavior has important effects on firm performance. Smith, Grimm, Chen, and Gannon (1989) were at the forefront of this literature stream with their identification of characteristics of competitive actions that evoked fast response times. A series of studies on the U.S. airline industry then emerged that sought to determine the antecedents and consequences of competitive actions and reactions (Chen & Hambrick, 1995; Chen & Macmillan, 1992; Chen & Miller, 1994; Chen, Smith, &

Grimm, 1992; Hambrick et al., 1996; Miller & Chen, 1994; Smith, Grimm, Gannon, & Chen, 1991). These studies served as the foundation for competitive dynamics research and determined, in large part, what we know of when firms take actions and formulate responses, and what type of actions and responses they form.

It is important to recognize that, despite the groundbreaking contributions of these studies, their common focus on the U.S. airline industry raises some questions about generalizability of their conclusions. Although more recent competitive dynamics research has started to broaden to other industries (e.g., Cool, Roller, & Leleux, 1999; Ferrier, 2001; Yu & Cannella, 2007), the literature would benefit from empirical studies that reach beyond a single-industry. In their recent review of competitive dynamics research, Ketchen and colleagues remark that "the ultimate objective of such research should be establishing generalizability, so the most useful studies will be those that compare two or more scenarios. Also, this stream would benefit from longitudinal research" (2004: 794). For this reason, I expect studies that examine the interaction between firms in multiple industries across several years could provide an important contribution to the competitive dynamics literature.

Further, competitive dynamics research has sought to describe specific types of competitive actions by categorizing them as either strategic or tactical (Dutton & Jackson, 1987; Porter, 1980). Smith et al. (1992: 63) define these terms as follows:

> Strategic actions involve significant commitments of specific, distinctive resources and are difficult to implement and reverse … Tactical actions, on the other hand, are often designed to fine-tune strategy; they involve fewer and more general resources than strategic actions, are easier to implement, and are often more reversible.

One limitation of the current body of competitive dynamics research is its focus on tactical (vis-à-vis strategic) competitive actions. Empirical competitive dynamics

research has developed well established relationships about the antecedents and consequences of tactical competitive activity (Ferrier, 2001), but has devoted less attention to differences that may emerge when examining strategic competitive actions.

Strategic and Tactical Actions. The definition provided above, combined with subsequent research, points to a number of characteristics of competitive actions that mark them as strategic rather than tactical. Foremost, strategic actions involve a significant commitment of specific resources, such as an investment in fixed assets (Galbraith & Kazanjian, 1986). Strategic actions are also less reversible than tactical actions (Chen & Macmillan, 1992). Porter (1980: 75) describes how "the behavior of competitors provides signals in a myriad of ways. Some signals are bluffs, some are warnings, and some are earnest commitments to a course of action." The extent to which an action is irreversible contributes to its interpretation as an earnest, strategic commitment rather than a bluff or warning. A somewhat related characteristic of strategic actions is that they are difficult to implement, which also makes them more difficult to imitate (Hambrick et al., 1996). Scholars also consistently recognize that strategic actions have longer time horizons than their tactical counterparts (Hambrick et al., 1996; Miller & Chen, 1996; Wernerfelt & Karnani, 1987). For example, Chen and colleagues (1992) write that "the effectiveness of strategic actions often remains uncertain for a long period of time."

Despite the popular use of this categorization, most empirical competitive dynamics research does not distinguish between strategic and tactical actions. The few studies that do are focused on the consequences of initiating different types of actions. Specifically, these studies consider the likelihood of response based on whether the

initiating action is strategic or tactical. The set of studies from the early 1990s on the U.S. airlines industry together demonstrated that strategic actions illicit fewer competitive responses than tactical actions (Chen & Macmillan, 1992; Chen et al., 1992; Smith et al., 1991). In their examination of competitive responses in the automotive industry, Yu and Canella (2007) differentiate between strategic and tactical actions, but here again the dependent variable was likelihood of response. So, although some studies have differentiated between strategic and tactical competitive actions, it has been with a view toward the consequences of initiating strategic rather than tactical competitive actions. Scholars have not yet asked questions about when and why firms initiate particular types of competitive actions.

The distinction between strategic and tactical competitive actions is particularly important when considering the influence of firm shareholders. Firms operate in complex environments and shareholders are typically invested in many different firms, so it would not be practical for shareholders to involve themselves in daily tactical decisions. They may, however, be interested in strategic competitive actions for several reasons. For example, shareholders may be concerned about managerial opportunism, and monitoring or controlling strategic competitive activity is one way to ensure that managers are not leveraging firm assets toward their own interests. Also, shareholders may wish to ensure that strategic competitive actions would lead to an increase in the value of their holdings. Further, shareholders may be subject to hubris, similar to top managers, and therefore may feel that their own perspective on strategic competitive activity should be imposed on firm managers. Therefore, it is reasonable to expect that shareholders will be

concerned with influencing the strategic competitive activity of firms in which they invest.

Competitive Rivalry. An important first step in competitive dynamics research is to determine which firms are competing against one another. A body of research has examined market definition and drawn conclusions about factors that cause firms to consider themselves competitors (Chen, 1996; Porac & Thomas, 1990; Porac, Thomas, Wilson, Paton, & Kanfer, 1995). This dissertation goes beyond the issue of defining a firms' competitors to explore competition between firms that are known to be in direct competition with each other. One line of research that examines how known competitors interact with each other is the study of industry leaders and their primary challengers, which are clearly competitive rivals (Ferrier, 2001; Ferrier et al., 1999).

Competitive rivalry is the specific consideration of firm dyads that take actions against each other to defend or improve market positions (Ferrier & Lee, 2002). Interest in competitive rivalry is rooted in Schumpeter's theory of creative destruction, where he describes head-to-head rivalry between firms as "an incessant race to get or to keep ahead of one another" (Kirzner, 1973: 20). As firms strive for competitive advantage, they must develop strategies for gaining advantage over their rivals. As such, scholars have sought to measure competitive rivalry in order to study factors that influence it. Industry rivals constitute a particularly appropriate arena for competitive dynamics research because they allow us to isolate the intended target of competitive actions. That is, when two firms dominate an industry, competitive actions designed to gain market share for one firm will have the simultaneous effect of reducing market share of the rival firm (Ferrier et al., 1999). Therefore, competitive rivalries between dominant firms are a subset of

competitive dynamics that serve almost as a laboratory for studying actions and reactions between firm dyads.

Mutual Forbearance. One way that rivalrous firms realize higher profits is by recognizing that continued competitive behavior brings mutual harm and tacitly agreeing to restrain competitive activity, or "mutually forbear" (Barnett, Greve, & Park, 1994). Scholars have mainly investigated this phenomenon in the context of multimarket contact (Baum & Korn, 1996; Gimeno & Woo, 1996b; Young, Smith, Grimm, & Simon, 2000). Empirical studies in economics (Evan & Kessides, 1994) and strategy (Boeker, Goodstein, Stephan, & Murmann, 1997) consistently show that high levels of multimarket contact results in fewer initiated competitive actions. When firms compete in overlapping markets, they can retaliate from rivalrous actions either in the market where the move occurs or in other markets where there is contact. Increased potential for retaliation motivates each firm to forbear from rivalrous behavior (Feinberg, 1984). Baum and Korn (1999) argue that multimarket contact improves rivals' ability to signal their intentions about competitive actions and responses. Stephan, Murmann, Boeker, and Goodstein (2003: 406) concur, noting that "high levels of contact ensure that signaling and competitive information is more accurately interpreted by market participants, enabling multipoint competitors to better coordinate their behavior." In other words, for mutual forbearance to occur, it is important to have some mechanism for tacit collusion. Multimarket contact is one such mechanism.

There is, however, very little research exploring other mechanisms that might foster mutual forbearance between rival firms. In particular, there may be characteristics of the firms that provide incentive to restrict competitive activity. Discussing mutual

forbearance, Golden and Ma (2003: 480) note that "the ability and desire to pursue these strategies may be limited to firms with certain specifiable characteristics." These authors considered the internal organizational structures that promote mutual forbearance, suggesting that integrating mechanisms and internal rewards for cooperation both make for an ideal mutual forbearer (Golden & Ma, 2003). However, they stopped short of considering how different governance mechanisms might provide incentive or disincentive for rivals firms to engage in competitive activity.

Summary. The study of competitive dynamics has developed over the past twenty years into a rich stream of research that has become central to strategic management literature. Scholars draw much of what we know about competitive dynamics from research in a few major industries, such as airlines and automobiles, which has prompted some to call for studies in multiple industries that will help to establish generalizability (Ketchen et al., 2004). Also, an emphasis on studying tactical competitive activity has left a gap in our understanding of strategic competitive actions, and in particular the antecedents of such actions. Competitive rivalry is a subset of competitive dynamics that explores actions and reactions between firm dyads. Rivals sometimes mutually agree to forbear, or limit competitive activity, and scholars have considered firm and inter-firm characteristics that would foster such forbearance. However, this research has not been extended to consider how governance mechanisms of firms in a rivalry might affect competitive actions, reactions, or mutual forbearance.

Broadly speaking, corporate governance addresses all of the factors and forces that work to harmonize the interests of managers and shareholders (Baysinger & Hoskisson, 1990). Although governance is most typically associated with boards of

directors, there are a variety of other forces, both internal and external to the firm, that help to define whether the interests of shareholders are well served (Daily, Dalton, & Rajagopalan, 2003). A firm's competitive activity is one area where managers and shareholders may have divergent interests. Therefore, an important scholarly consideration resides at the intersection of governance and competitive dynamics as we seek to understand when and why managers and shareholders may hold different views about competitive activity, and what may be done when those views diverge. Toward this end, the next section begins to address firm governance and the dominant theoretical perspective that has been used to explain the role of governance on firm strategies - agency theory.

Agency Theory

Within strategic management, agency theory is a frequently used theoretical lens that has successfully informed research on corporate governance (Dalton et al., 2008). This theory is concerned with the agency problem, which addresses two incongruities in the principal-agent relationship (Eisenhardt, 1989). The first arises when goals of the principal and agent conflict and it is difficult or expensive for the principal to verify whether the agent has behaved appropriately. The second incongruity is that of risk, a problem which arises when the principal and the agent have different attitudes toward risk and consequently may prefer different actions (Fama, 1980). Principals establish governance mechanisms to minimize agency concerns about incongruent goals and risk preferences (Jensen & Meckling, 1976).

The mechanisms that are used for reducing the agency problem provide a natural means for dividing research on corporate governance into four dominant literature

streams (Hitt, Ireland, & Hoskisson, 2007). The first considers boards of directors, and in particular their role in monitoring firm activities (Johnson, Daily, & Ellstrand, 1996). A second stream examines the role of executive compensation as a governance mechanism that seeks to align the interests of managers and owners (Devers, Cannella, Reilly, & Yoder, 2007). A third stream, the market for corporate control, is an external governance mechanism that comes into play when other mechanisms fail (Sinha, 2004). The fourth literature stream examines firm ownership as a form of governance and has received considerable research interest in accounting, finance (Demsetz & Villalonga, 2001), and management (Dalton, Daily, Certo, & Roengpitya, 2003) journals. Shareholders have the ability to govern firm actions because of the collective power they hold in the form of outstanding shares.

Although shareholders are empowered to monitor and control major corporate decisions (Bebchuk, 2005; Gillan & Starks, 2007), there are several obstacles to the effectiveness with which shareholders may function as a governance mechanism. One problem is diffusion of ownership. In general, a large number of small-scale owners makes it more difficult for those owners to effectively concentrate their actions. There are campaign costs associated with bringing diffuse owners together to form a common voice, making diffuse shareholders an inefficient form of governance. Diffuse ownership also provides weak monitoring because it reduces shareholder incentives to investigate the quality of corporate decision-making (Bebchuk, 2005). A single shareholder who owns only a fraction of the firm would not want to invest too much time and money in monitoring because they would derive only a portion of the benefits of good corporate decision-making. A second problem is that of bounded rationality (Simon, 1957).

Shareholders hold imperfect knowledge about the kinds of actions that firms could and should take (Jensen & Meckling, 1976), which limits their effectiveness as a governance mechanism and increases the likelihood they will impose decisions that will reduce shareholder wealth. A final problem is that of consistency. Inconsistency and unreliability in corporate decision-making can hinder long-term planning and bring about the need for more explicit contractual provisions with partners. A diffuse body of shareholders may impose sectional interests, reducing consistency and introducing a form of uncertainty for contracting partners.

These obstacles together suggest that shareholders may be both inefficient and ineffective governors of firm actions. However, all shareholders are not equal. What makes institutional investors particularly interesting as a subset of shareholders is their unique ability to overcome common shareholder obstacles and effectively govern firm actions. These investors and their unique role in firm governance are described in the next section.

Institutional Investors as a Form of Governance

Institutional investors are a general class of equity holders that file 13-f Securities and Exchange Commission (SEC) reports. The SEC requires that all institutions managing more that $100 million in equity must file a quarterly report listing all holdings that are greater than 10,000 shares or $200,000 in market value. These investors include mutual funds, hedge funds, pension funds (public, private, and corporate), banks, insurance companies, foundations, and endowments. The economic power and clout of institutional investors has risen steadily in recent decades as they have gained an increasing percentage of U.S. equities. In 1970 this group held 20% of U.S. equities,

increasing to 45% in 1990 and rising steadily to over 70% by the end of 2006 (Gillan & Starks, 2007). Further, this group accounts for ¾ of the trading in equities listed on the New York Stock Exchange (NYSE) (Karmel, 2004). These figures suggest that institutional investors have the size and potential influence to capture manager's attention, discipline ineffective managers, and affect firm strategies.

The collective power and influence of institutional investors took a turn in 1985 with the formation of two unifying groups: the Council of Institutional Investors (The Council) and Institutional Shareholder Services (ISS). The Council is a group of 130 pension funds that together control financial assets exceeding $3 trillion. Working together allows these investors to mutually benefit from common research and resources and apply collective pressure on firms to act in their interest. As such these institutional shareowners have a much greater voice today than they did 20 years ago (www.cii.org/about). ISS and its more recently-formed rival, Glass, Lewis, & Co., serve a broader constituency of clients, analyzing firms and providing extensive research services and vote recommendations for a wide range of institutional investors. These groups have facilitated the ability of institutional investors to better understand the firms in which they invest and more effectively influence those firms to act in the best interest of shareholders.

There are several reasons why institutional investors are able to overcome obstacles to firm governance encountered by other shareholders. Clients of institutional investors sign over their voting rights, effectively centralizing the bargaining power of all those clients in a single entity and avoiding campaign costs. In fact, a number of institutional investors could even combine their bargaining strength because there are

fewer of them than there are general investors. With their large holdings, institutional investors also have both the incentives and the resources to monitor firm actions (Pound, 1988). Institutional investors also benefit from membership in dedicated coordinating bodies, such as ISS and The Council, which gives them access to research and inside information not available to other investors (Grinstein & Michaely, 2005). These organizations combine with institutional investors' own professional staff to reduce the problem of bounded rationality and increase monitoring effectiveness. Consistency is also easier to achieve for institutional investors because they are run by a relatively small group with objectives that do not change much over time.

As governers of firm actions, institutional investors serve as principals that have delegated activities of the firm to its managers, the agents. In this principal-agent relationship, institutional investors have three primary means of reducing agency concerns: exit, voice, and loyalty. In his classic work, *Exit, Voice, and Loyalty*, Hirschman (1970) described the ways in which people and businesses respond to organizational decline. In times of underperformance an organization's constituents can opt out of difficulties by turning away (exit), they can use their leverage and resources to help restore performance (voice), or they can remain committed to the status quo (loyalty). These parallel the choices available to principals when agents do not act in accordance with their desires. Within the agency theory perspective, institutional owners are principals and firms are their agents. If owners perceive that firms are not acting in accordance with their objectives, they may exit, exercise their voice, or remain loyal. A strategy of loyalty suggests that the principal passively stays the course and does not take

specific action to align the interests of principal and agent. Exit and voice, however, are both active means of monitoring agent activity.

Exit simply refers to "the Wall Street walk," meaning the institutional owner sells their shares of the firm. Doing so disciplines firms for lack of compliance to owner preferences because each exit marginally reduces the value of the firm (Parrino, Sias, & Starks, 2003). Exit is not always a viable option, though, because once owners obtain a substantial percentage of a firm's stock then it becomes difficult or impossible to liquidate the stock before its value declines. Also, in the case of owners such as California Public Employees Retirement System (CalPERS) that has hundreds of billions of dollars to invest, their ability to exit is limited by their ability to find better alternatives in which to invest. Such owners, with massive total portfolios, may be forced to remain invested in firms which they would prefer to exit because they are already broadly invested in all the better alternatives of which they are aware.

Therefore, firms that do not or cannot exercise their will through exit may do so through voice-based governance (Filatotchev & Toms, 2006), which applies pressure to align agent and owner objectives via different forms of activism. Research has shown that exercising voice can affect the types of strategies that firms undertake (David et al., 2001; Hoskisson et al., 2002). The most common means by which institutional investors exercise their voice is through each vote that they earn by virtue of being a shareholder. Coordinating bodies often provide voting guidelines to ensure that institutional investors are aware of important issues and increase their governing power by voting in unison. Voting power may be combined with the power to initiate shareholder proposals for even more effective governance. Fidelity, for example, announced in 2002 that if executive

compensation and firm performance were not sufficiently linked then it would vote against the firm's directors. Proxy contests are another form by which institutional investors exercise voice. The costs of waging a proxy battle are high because the deck is stacked in management's favor, so this method tailed off in the 1990s. However, it has recently gained momentum; there were thirty such contests in 2004, forty in 2005, and ninety-one in 2006.

Besides voting-oriented forms of activism, institutional investors can also exercise their voice through other means. For example, some have used the media to pressure management to make changes (Schwab & Thomas, 1998). Others participate in direct negotiations with management or even publicly announce their opposition to management (David et al., 2001). Institutional investors may also engage in behind-the-scenes discussions with management or directors. For example, Fidelity (with 10% ownership) and Highfields Capital Management (with 5% ownership) worked behind the scenes to sway the Mays family to endorse a buyout of Clear Channel Communications. After the board initially opposed the deal, the board's turnaround came after a protracted battle and pressure from many of the company's largest shareholders. In sum, there are a variety of means available to institutional investors by which they may make their voice heard. Useem aptly notes that "fifteen years ago, the CEO and CFO did not know major shareholders and really didn't care. CEOs are now more accessible to money managers" (Ettore, 1996: 29).

Institutional Investors and Firm Strategies

Owing to the role of institutional investors in firm governance, some researchers have sought to establish a relationship between a firm's percentage of shares held by

institutional investors and firm performance. Empirical evidence examining this relationship has been mixed (Dalton et al., 2008). However, meta-analytic findings suggest something more complex, because there may be moderating influences that change the nature of the relationship (Dalton et al., 2003). For example, relationships may be significant when researchers examine different types of institutional investors rather that institutional investors as a whole, or more specific firm outcomes rather than overall firm performance. In fact, scholars have found that institutional investors have significant influence on many specific firm-level strategies (e.g., Baysinger, Kosnik, & Turk, 1991; Bethel & Liebeskind, 1993; Brickley, Lease, & Smith, 1988). These results are even more pronounced when researchers distinguish between different types of institutional investors, finding that some are more influential than others and different types are concerned with different outcomes (e.g., Johnson & Greening, 1999; Ramaswamy et al., 2002; Zahra, Neubaum, & Huse, 2000). The next two sections discuss the different types of institutional investors that researchers have explored and how they influence specific strategies.

Classifying Institutional Investor Types. Advancing beyond aggregate institutional ownership, scholars have sought to distinguish between different categories of institutional investors. This is because different types of owners do not have the same investment objectives and are therefore likely to impose pressures on firms toward differing ends. One commonly used scheme categorizes institutional investors as "pressure-resistant," "pressure-sensitive," or "pressure-indeterminate" (Brickley et al., 1988). This classification system is built around the notion that an institutional investor's

ability to influence firm outcomes may be limited by the extent to which that investor depends on the firm for business.

The dual activities of investment and economic business relationships may engender conflicts of interest. Pressure-sensitive institutions (e.g. financial institutions and insurance companies) have ongoing business relations with firms in which they invest. For these investors, there is a precarious balance between power over a firm due to their ownership stake and dependence on the firm due to their business activity. They are less likely to influence strategies because firms can retaliate for any unwanted pressure. Pressure-resistant institutions (e.g. public pension funds, mutual funds) do not have active business relationships. These investors have no conflict of interest. Therefore, they are better able to affect significant strategic decisions of firms in which they invest (Brickley et al., 1988; Kochhar & David, 1996). A third group, pressure-indeterminate institutional investors (e.g., corporate pension funds), are less clear. These firms do not necessarily have a direct business relationship with the firm but may be reluctant to influence firm actions for other reasons.

In the strategic management literature, scholars are primarily concerned with those institutional investors that hold sway over firm strategies. Therefore, they have further categorized the most pertinent group, pressure-resistant investors, as being either professional investment funds or public pension funds (e.g., Johnson & Greening, 1999; Tihanyi et al., 2003). Doing so allows them to distinguish not only on the basis of business relations with the firm but also based on a number of other characteristics particular to the institutional investor.

Professional investment funds have a number of common characteristics. For example, they are averse to firms about which there is little information and they are sensitive to past returns (Falkenstein, 1996). The holdings in professional investment funds turn over relatively frequently, with average holdings being somewhat less than a year (Gilson & Kraakman, 1991). One reason is that fund managers are typically evaluated and compensated based on quarterly results, so they are often chasing short-term performance gains. Therefore, professional investment funds have short time horizons They are also likely to rely on a relatively narrow set of secondary-source investment information rather than trying to go deep into the firm itself for information, again suggesting a tendency toward high visibility firms. Public pension funds, on the other hand, are more concerned with long-term yields and more forgiving of past performance declines (Gilson & Kraakman, 1991). To protect the long-term interests of their clients, they are broadly diversified across many firms. Time horizons are longer as these institutional investors usually follow a buy-and-hold approach to investing. Thus, we see some important distinctions between professional investment funds and public pension funds. This finer-grained examination of institutional investors has provided valuable insights about the influence of these investors on innovation (Hoskisson et al., 2002), diversification (Tihanyi et al., 2003), and corporate social performance (CSP) (Johnson & Greening, 1999). However, more extensive categorization may explain additional variance because professional investment funds may have widely varying investment objectives. Accounting for the trading preferences of different professional investment funds may provide further insight.

Bushee (1998) has provided an alternative categorization of institutional investors based on detailed analysis of their observed investment decisions. He "classifies institutional investors into groups using the specific characteristics of institutional investor behavior that have been argued to increase the pressure on managers to manipulate earnings" (1998: 310). Using factor and cluster analysis, Bushee parsimoniously classifies owners into three types, consistent with Porter's (1992) discussion of how institutional investors differ in their behavior and incentives. Specifically, Porter (1992) argues that "transient" institutional owners create pressure for myopic strategies. These owners hold stakes in many different firms and frequently trade in and out of firms based on financial value proxies such as current earnings. The likelihood that they will sell a firm's stock in the event of disappointing financial news provides incentive to managers to avoid such disappointments and focus on short-term financial gains. The combination of short time horizons and diversified holdings makes it difficult for transient institutional investors to gather information about the long run value of firms in which they invest, causing managers of those firms to make myopic strategic decisions (Bushee, 1998). The broad holdings of transient owners also suggest that they will capture only a portion of the benefits of positive firm actions, making them less likely to invest their own resources to ensure that such actions occur.

In contrast, Porter (1992) argues that "dedicated" owners alleviate these pressures because they maintain large, long-term holdings that are concentrated in a few firms. These owners have incentive to monitor managerial behavior and are able to understand richer and more complex information about firms in which they invest. Dedicated institutional owners are more likely to be tolerant of short-term earnings disappointments

as long as they are comfortable with long run value prospects. Even if dedicated institutional owners wanted to exit from firm ownership, it is difficult for them to do so because the value of the firm's stock would be negatively affected by initial sell-off such that they would be unable to efficiently sell their entire portfolio. Therefore, these owners have added incentive to monitor managerial behavior and ensure they are making decisions that will create long run value for the firm. Dedicated institutional owners also have less diversified holdings. They own fewer firms and more of them. This makes them better able to monitor and understand the activities of firms in which they invest, and also appropriates a greater share of the benefits of positive firm outcomes.

A third group, "quasi-indexers," also use buy-and-hold strategies but are characterized by indexing and high portfolio diversification. This group has abdicated their monitoring role because their investment decisions follow broad indexes regardless of the strategies adopted by particular firms within those indexes. They are, therefore, of less interest from a governance perspective (Bushee, 1998).

Using Porter's (1992) descriptive terms, Bushee (1998; 2001) classifies all institutional owners into one of the three categories based on a variety of variables that analyze their investment tendencies and trading portfolios. These classifications are now well established in the accounting literature (Abarbanell, Bushee, & Raedy, 2003; Bushee & Noe, 2000; Ke & Petroni, 2004), but are only recently being applied in the management literature (Higgins & Gulati, 2006). The categorization method may, however, hold value for strategic management research because it delineates groups of institutional investors with reasonably homogenous incentives about how they will influence firm strategies (Bushee & Noe, 2000). Dedicated institutional investors will

have longer time horizons, buy-and-hold investment strategies, and larger shares of firms in which they invest. For this reason, they will favor strategies that provide value to the firm and will be more likely to intervene and apply pressure toward long-term objectives. Transient institutional investors are just the opposite, with shorter time-horizons, greater portfolio turnover, and a preference for near-term earnings potential. In fact, early indication from Bushee's research suggests that transient (dedicated) institutional investors exhibit preferences for near-term (long-term) earnings, providing initial evidence that helps to "establish a link through which institutional investors could pressure managers into a short-term focus" (2001: 207).

Influence on Specific Firm Outcomes. Perhaps the most highly investigated link between institutional investors and decisions within the firm has been examination of their influence on innovation. Baysinger, Kosnik, and Turk (1991) initially found a positive relationship between institutional ownership concentration and corporate R&D spending. The relationship between institutional ownership and corporate risk taking was also found to be positive (Wright, Ferris, Sarin, & Awasthi, 1996). Later research examined these relationships in more detail, finding that professional investment funds prefer external innovation whereas pension funds prefer internal innovation (Hoskisson et al., 2002). David, Hitt, and Gimeno (2001) added the notion that institutional investors affect R&D through the medium of activism. One important distinction that this line of research has discovered is that pressure-resistant institutions are positively associated with innovation, but pressure-sensitive institutions are negatively associated with innovation (Kochhar & David, 1996; Zahra et al., 2000). Zahra and colleagues note that "pressure-sensitive institutions are similar to Porter's (1992) depiction of transient

ownership" (2000: 952). Bushee (1998) captured this difference more explicitly, finding that it is primarily dedicated and quasi-indexer investors that maintain R&D spending, whereas transient institutional investors are more likely to cut R&D spending in order to meet short-term earnings goals. Thus, scholars have found that different types of institutional owners influence firm innovation in opposite directions.

Research on the relationship between ownership and corporate diversification has also received significant scholarly attention. Financial economists have often cited a landmark study by Amihud and Lev (1981) to show that the absence of large and powerful shareholders resulted in greater unrelated product diversification. Strategic management researchers, however, questioned these findings (Boyd, Gove, & Hitt, 2005) and found in reanalysis that ownership concentration was not related to product diversification (Lane, Cannella, & Lubatkin, 1998). More detailed analysis has found that pressure-sensitive institutional owners are associated with unrelated product diversification whereas the association is negative for pressure-resistant institutional owners (Ramaswamy et al., 2002). Institutional owners also appear to influence international diversification (Tihanyi & Ellstrand, 1998). In contrast to product diversification, all institutional owners seem to have some interest in international diversification (George, Wiklund, & Zahra, 2005), but groups of institutional owners are likely motivated to encourage international diversification for different reasons (Tihanyi et al., 2003). Thus, as was the case with innovation, detailed analysis of particular types of owners has uncovered important differences between groups as to how and why they influence corporate diversification.

Strategic management scholars have examined institutional influence on a number of other firm level outcomes. Early research showed that institutional investors foster restructuring activity in order to create more efficient organizations (Bethel & Liebeskind, 1993). They also reduce the likelihood of antitakeover defenses (poison pills) being adopted because such mechanisms are detrimental to shareholder value (Brickley et al., 1988; Mallette & Fowler, 1992). More recent research on the influence of institutional investors on corporate social performance (CSP) has followed the trend of classifying institutional investors to determine unique preferences. Initial findings showed that mutual funds are negatively associated with CSP whereas pension funds are positively associated with CSP (Johnson & Greening, 1999). Neubaum and Zahra confirmed these results, finding that

> long-term institutional owners, who usually support investments in long-term activities, may view CSP as necessary for sustainability and gaining competitive advantage. Short-term institutions, however, are likely to consider investments in CSP as costs that have limited benefits in the near term (2006: 113).

Although these authors use a rudimentary operationalization of long-term institutional ownership as pension funds and short-term institutional ownership as mutual funds, their theoretical arguments are similar to those who classify investors by trading portfolio.

Summary. Together, the studies above have contributed a great deal to our understanding of firm governance and strategy development. We have learned that institutional investors do, indeed, have important effects on firm strategies, and that they are best understood as a heterogeneous group with respect to their strategic preferences. Some of the most significant effects are found when institutional owners are classified according to their trading habits, with clear distinctions seen between long-term and short-term investors. However, while there is evidence that institutional owners affect

broad strategies, scholars have not yet examined the extent to which these owners involve themselves at the level of strategic competitive actions. The literature would benefit from examination of the reach of institutional investors. Do they influence firms in a general way, with a guiding hand helping them decide which paths to choose, or do they have a more refined influence on each step along the path, affecting specific actions that firms undertake? Further, the focus in the literature to date has mainly been on the focal firm. That is, research questions have centered on how institutional investors in a particular firm affect some strategy of that firm. Scholars have yet to examine how institutional investors might affect the way firms interact and compete with one another. Scholars have also not explored the notion that institutional investors maintain broad portfolios that could include ownership of a firm and its competitors.

CHAPTER III

HYPOTHESES

There are several reasons to believe that institutional investors might influence competition between firms. Among the various corporate governance mechanisms studied, owners are unique in their ability to influence the firm through exit. Investors may buy or sell shares in the firm as they please, so firms that do not conform to an investor's preferred competitive stance may be threatened with losing a portion of their ownership. Also, institutional investors vary in their time horizons. These differences are likely to result in different preferences for competitive intensity or competitive deterrence, similar to differences found in preferences for innovation and CSP. Dedicated and transient institutional owners have important differences in their motives and capabilities for monitoring strategic competitive activity and in the objectives they wish to pursue. Further, institutional investors hold broad portfolios that may include holdings of a firm's competitors. This, too, is likely to have implications for the extent to which they would like to see those firms compete with one another. This last point suggests that research questions might be extended to ask how institutional ownership in one firm might affect strategy in a competitive firm. Therefore, in this section I develop specific postulates about how and when dedicated and transient institutional investors may affect strategic competitive behavior in inter-firm rivalries.

Direct Relationships

Relational Investors, headed by Ralph Whitworth, is a good example of a dedicated institutional investor. The average market value of Relational's holdings total around $26 billion, but this is all invested in fewer than a dozen firms at a time. Relational looks for firms that are undervalued and seeks to implement change that will enhance shareholder value. They look to implement actions that could turn the company around within two to three years, but their investment horizon often proves even longer. Recently Relational grabbed a $1.3 billion stake in Home Depot, a firm whose stock has remained stagnant during a six year period when shares of rival Lowes have nearly tripled. Relational urged strategy changes that led to the departure of Home Depot's CEO This potent example sets the stage for the following arguments about the direct relationship between dedicated institutional investors and strategic competitive activity.

Strategic competitive actions are aimed at providing above-average returns over a long time horizon. One reason is that, as compared to their tactical counterparts, these actions require more significant commitment of specific resources (Smith et al., 1991). This may be detrimental to the ability of the firm to compete in the short-term, because those resources are no longer available for tactical competitive activity. For example, Toyota's expenditures on research and development and dedicated manufacturing equipment to support the firm's desire to be the leading provider of hybrid vehicles is a strategic action. By redirecting financial and human capital toward establishing early market share in the small but growing hybrid vehicle market, Toyota cannot use those resources to compete more successfully in their established markets that may have a more near-term payoff. Further, by investing in specific assets firms make themselves more

susceptible to rapid changes in the industry environment (Shimizu & Hitt, 2004). Firms that undertake strategic competitive actions become less flexible in the near term because they are less able to shift and move resources to meet changing environmental demands.

Strategic competitive actions are also difficult to implement (Hambrick et al., 1996). If a competitive action were incremental or easy to put in place, then it would be readily imitated and would, by definition, not be strategic. Therefore, because they are difficult to implement, strategic competitive actions require more time to put in motion and take effect. However, rivals will also have greater difficulty arranging and applying the necessary resources to respond to strategic competitive actions. With competitors less able to respond, strategic competitive actions hold greater potential for long-term competitive advantage.

Further, strategic competitive actions are less reversible than their tactical counterparts, which has a less obvious but equally important effect on the action's ability to provide long-term competitive advantage. The cost of reversing an action signals rivals about a firms' commitment to a particular strategic action (Chen & Macmillan, 1992). Porter remarks that "if a firm can convince its rivals that it is committed to a strategic move it is making or plans to make, it increases the chances that rivals will resign themselves to the new position and not expend the resources to retaliate or try to cause the firm to back down. Thus, commitment can deter retaliation" (1980: 101). If competitors, over time, resign themselves to the new position, the strategic competitive action will provide long-term competitive advantage to the firm. Thus, strategic competitive actions also hold potential for long-term competitive advantage because competitors are less motivated to respond.

Additionally, the buy-and-hold investment strategy of dedicated institutional investors may help firms to secure resources in support of costly strategic competitive actions with long-term payouts (Tihanyi et al., 2003). Perhaps the most obvious resource these investors provide is financial capital. Although dedicated and transient institutional investors alike provide access to financial resources for firms, dedicated institutional investors provide more "patient" capital that may be used for projects and investments that do not have a near-term payout (Bushee, 2004). Also, dedicated institutional investors provide firms with access to another resource that is sometimes overlooked: human capital. For example, billionaire investor Edward Lampert has a reputation for building positions in undervalued companies and then working behind the scenes to improve their performance. Such investors can help firms extract themselves from the trap of strategies aimed exclusively at next quarter profitability and instead focus on strategic competitive actions that provide long-term value (Bushee, 2001; Taylor, 1990).

Dedicated institutional investors will also be interested in strategic competitive actions because their investment strategy gives them incentive to be more active monitors of firm activity. They exercise their will through voice rather than exit (David et al., 2001). As such, they have more information about firms in which they invest and are better attuned to the kinds of activity that could potentially add value to those firms. The holdings of dedicated institutional investors are concentrated in a small number of firms, making them better able to understand the potential benefits of strategic competitive actions of those firms. This allows dedicated institutional investors to be more tolerant of short term investments, as long as they are confident of long run prospects.

H1: Dedicated institutional ownership is positively associated with the firm's level of strategic competitive activity.

Transient institutional investors are also likely to be interested in the performance gains that accompany strategic competitive actions, but will also be less tolerant of strategic competitive activity on the whole. Some level of strategic competitive activity is necessary to stay afloat in a competitive environment. Transient institutional owners are well aware of the competitive environment in which firms operate, and are therefore likely, to some extent, to encourage strategic competitive activity for firms in which they invest. However, as strategic competitive activity increases, transient institutional investors may become increasingly concerned with potentially negative, or at least uncertain, effects on short-term gains. The desire to see strategic competitive actions will diminish as such activity accumulates. Whereas low levels of strategic competitive activity will attract transient owners because it signals an ability to compete, increased levels of strategic competitive activity may be less appealing to transient owners because it signals that firm resources are tied up, inhibiting their ability to adapt to a changing environment. This suggests that transient institutional investors will foster strategic competitive activity, but at a decreasing rate.

There are several reasons to suggest that transient institutional investors will discourage rising strategic competitive activity. First, the time horizon of their investment strategy indicates that they will become increasingly concerned as strategic competitive activity accumulates. Transient institutional investors favor stock value gains that result from short-term performance improvements, and are therefore likely to be wary of the short-term implications of increasing amounts of strategic competitive activity. Contrary

to dedicated owners, transient owners will not engage in activism to express concerns about increasing strategic competitive activity. Instead, they will discourage excessive strategic competitive activity by relying on quick entry and exit as their investment strategy. Because of their short-term holdings, transient investors will not be involved with a firm long enough to realize all of the gains associated with strategic competitive activity. Therefore, as strategic competitive activity increases they may turn their investment to other firms where they are more likely to capture the full value of firm actions.

The compensation and incentive structure of transient owners is also oriented toward immediate gains; managers of these types of funds, for example, are frequently evaluated with regard to the funds' performance (Baysinger et al., 1991). These pressures are likely to be passed on to firms in which they own shares. This will be consistent with some level of strategic competitive activity because such activity makes the firm more competitive and yields performance gains. However, increased levels of strategic competitive activity effectively push the window of expected gains further out because more and more firm resources become dedicated to long-term objectives. As the window of expected returns moves outward, fund managers may become concerned that gains will not be realized on their watch. So, an increasing amount of strategic competitive actions may be frowned upon because such actions do not alleviate the pressure for short-term financial returns. Also, transient institutional investors are usually in fierce competition for clients (Hsu & Koh, 2005). If a transient institutional investor shows a single quarter with a loss or even below-average performance, they stand in danger of

losing clients. Therefore, these investors cannot allow the window of potential gains to be pushed out too far because doing so would risk losing their own clientele.

Transient institutional investors also may become increasingly less tolerant of strategic competitive actions because they are poor monitors of firm activity. The stakes they hold in firms are smaller than that of dedicated owners, making it more difficult to gather and understand strategic information about firms in which they invest. With their more diversified holdings, they cannot monitor strategic activity but instead must rely on financial value proxies. Therefore, they are more likely to sell a firms' stock when increasing strategic competitive activity causes the firm to fall short of short-term earnings goals. At the same time, transient institutional investors may be better monitors of financial indicators across the industry because their frequent trades require them to be cognizant of alternative investment opportunities. Armed with an acute awareness of the financial performance of a wide universe of firms, transient institutional owners may shift to alternative investments as strategic competitive activity increases in the focal firm. In short, transient owners are interested in the performance benefits of strategic competitive activity, but their reliance on financial indicators imposes limits on the extent to which they will tolerate such activity because they become increasingly less able to understand the potential gains as strategic competitive activity increases. These arguments suggest the following relationship:

> *H2: Transient institutional ownership is curvilinearly associated with the firm's level of strategic competitive activity; it is positive, but at a decreasing rate.*

Board Representation

Returning to the earlier example of Relational Investors, Whitworth's investment arm frequently attempts to take over a position on the board of directors of firms in which

it invests. Having acquired a large stake in Sovereign Bancorp in 2005, Whitworth himself captured a seat on the board. Within six months, the CEO was fired and the firm engaged in a number of strategic activities designed to get it ready for sale. In fact, Relational Investors often seeks two board seats on firms in which it invests because doing so always allows them to second their motions, thus forcing a board vote and making the issue a matter of record. This example illustrates how dedicated institutional investors can amplify their activism through specific board representatives, which I describe in the following paragraphs.

Dedicated institutional owners have historically sought to influence competitive action by influencing management, the board of directors, or both. Shortly after World War II the adoption of SEC rule 14a-8 forced managers to entertain shareholder proposals, giving dedicated institutional owners a somewhat more direct form of influence (Sundaramurthy & Lyon, 1998). However, until the mid-1980s most of these proposals were limited to very few "gadfly" individuals that were treated with condescension at annual meetings. Recent years, however, have seen rapidly escalating involvement from dedicated institutional investors, with increasing amounts and new forms of activism emerging every year (Gillan & Starks, 2007). As the role of dedicated institutional owners has gained momentum, these investors have sought ways to ensure that their voice is heard and not ignored.

One of the most commonly studied means that institutional owners use to make certain that competitive actions will comply with their investment preferences is a board of directors that represents them well. Agency theorists have traditionally examined the extent to which the board of directors represents the interests of shareholders by

measuring board independence (Hermalin & Weisbach, 2003; Mizruchi, 1983). This research generally suggests that (a) outside directors will be more concerned with financial controls and immediate returns (Tihanyi et al., 2003) and (b) inside directors have better access to internal information and are therefore more apt to rely on strategic controls and pursue projects with long-term positive returns (Zahra, 1996). However, several meta-analyses and reviews have not found systematic relationships between board independence and corporate performance (Bhagat & Black, 2002; Dalton, Daily, Ellstrand, & Johnson, 1998; Hermalin & Weisbach, 2003). Further, owing to increased emphasis on independence, board insiders are becoming somewhat of a dying breed (Raheja, 2005). This suggests that institutional owners seeking better representation on the board of directors need to look beyond simply distinguishing between insiders or outsiders who, in principal, represent their interests.

Dedicated institutional owners are increasingly addressing this issue by attempting to garner one or more board seats for their own specific representative. A seat on the board of directors provides added influence in at least three important ways (Johnson et al., 1996). First, it provides a high level of inside information about firm resources, projects, and strategic alternatives (Hillman & Dalziel, 2003; Kesner, 1987). Access to this rich information allows directors to understand the long-term benefits of strategic competitive actions, making them likely to be in favor of such actions. Second, a board seat provides the ability to monitor board and management actions (Sundaramurthy & Lewis, 2003). They can use this improved monitoring to ensure that the company is investing in strategic competitive actions that will provide long-term shareholder value. Third, a board seat provides a mechanism to put forward proposals and votes at board

meetings. This gives added sway beyond proposals put forward at annual shareholder meetings. For these reasons, holding a seat on the board of directors increases the ability of dedicated institutional investors to influence firm strategic competitive activity.

Garnering a board seat is a viable strategy for dedicated institutional investors because they are involved with the firm for long enough duration. Investors need quite a bit of time to benefit from a board seat because they first need to negotiate with the firm and possibly wage a campaign in order to capture the board seat. Also, the benefits are not immediate. For example, it will take time for the new board member to gain inside knowledge about the firm and to be in a position to recommend strategic competitive actions that will result in long-term value for shareholders. Dedicated institutional investors are invested with firms in their portfolio long enough capture a board seat and benefit from it. Therefore, dedicated institutional investors are likely to be interested in capturing a seat on the board of firms in which they invest. When they do so, it will facilitate their ability to ensure those firms are investing in strategic competitive actions. Interestingly, scholars have not yet considered how specific owner representatives on the board of directors affect firm level outcomes.

> *H3: The positive relationship between dedicated institutional ownership and the firm's level of strategic competitive activity is moderated by owner representation on the board of directors; the relationship is strengthened when representation is high.*

Common Ownership Between Rivals

Another possible moderator of the relationship between dedicated institutional investors and strategic competitive activity arises from the notion of mutual forbearance. Researchers almost always consider mutual forbearance in the same breath as multi-

market competition, with the idea being that firms competing simultaneously in several markets are more likely to stake out spheres of influence (Baum & Korn, 1996; Gimeno, 1999; Gimeno & Woo, 1996a). They do so when Firm A intentionally refrains from competitive activity in a market where Firm B is dominant, with the implicit understanding that Firm B will reciprocate, refraining from competitive activity in a market where Firm A is dominant. However, we may also understand mutual forbearance in a more general sense as a live-and-let-live policy wherein firms implicitly agree to refrain from competitive activity in one or all markets in which they compete (Stephan et al., 2003). In this way, mutual forbearance is not about two firms staking out separate spheres of influence, but instead describes two firms tacitly colluding to achieve maximum profits within the same sphere of influence.

Mutual forbearance in this latter sense lends itself to the commonly expressed prisoner's dilemma. Simply stated, Firm A will achieve the highest profits when they undertake strategic competitive activity but Firm B does not. However, Firm B is likely to retaliate, which would provide the lowest profits to both firms. The highest aggregate profits are earned when both firms restrict strategic competitive activity, or mutually forbear. The dilemma arises because, should Firm A forbear in anticipation of mutual benefit, it will suffer if Firm B does not reciprocate. The only possible equilibrium is that each firm will continue to engage in strategic competitive activity, unless some mechanism exists to resolve the dilemma (Axelrod, 1984; Bettis & Weeks, 1987). Interfirm mechanisms that can foster cooperation in the prisoner's dilemma include those that signal trust, deter rivalrous behavior, or govern both potential defectors in the rivalry (Caves & Porter, 1977; Perks & Halliday, 2003; Young et al., 2000).

Dedicated institutional owners will be interested in potential profit gains associated with mutual forbearance. However, dedicated institutional owners impose pressure on firms to engage in strategic competitive activity. There is little reason to believe that they would reduce this pressure on the hope that rivals would mutually forbear, as the prisoner's dilemma suggests, because they have no guarantee that rival firms will cooperate. Any pressure they apply to refrain from strategic competitive activity would be one-sided and self-defeating.

An exception occurs when dedicated institutional investors can leverage a mechanism to circumvent the prisoner's dilemma. One such mechanism may occur when dedicated institutional investors have high levels of ownership of both firms in a rivalry. In this case, dedicated institutional investors serve as a mechanism fostering cooperation. This works in at least two ways. First, when dedicated institutional investors have high levels of ownership of rival firms it provides leakage that fosters collusion. Firms are in constant communication with their owners about strategic intentions, so if there is commonality among these owners then there is a greater likelihood that firms will know and understand the signals that they are trying to send to each other. Second, dedicated institutional investors with high levels of ownership in rival firms have the capacity to govern both firms. When a firm restricts its strategic competitive activity it can be more confident that its rival will cooperate because a common owner has the ability to punish defectors. Thus, an *interfirm* governance structure arises such that dedicated institutional investors may be less likely to apply pressure on either firm to engage in strategic competitive activity because they are aware that increased competition will reduce average profits in the industry. Therefore, although dedicated institutional investors are

generally interested in fostering strategic competitive activity, this relationship will be tempered when rival ownership is high. Cohen et al. (2003) describe this as a buffering interaction.

> *H4: The positive relationship between dedicated institutional ownership and the firm's level of strategic competitive activity is moderated by common dedicated institutional ownership of a firms' rival. Specifically, high common dedicated institutional ownership weakens the relationship.*

Transient institutional owners are also likely to be interested in potential profit gains associated with mutual forbearance. Transient institutional investors with large stakes in rival firms can circumvent the prisoner's dilemma in the same ways as dedicated institutional investors. Namely, they can leak information between rivals to improve signaling and they can punish defectors (through exit) for not cooperating with a rival's forbearance (Axelrod, 1984; Caves & Porter, 1977).

These owners already become cautious with increasing levels of strategic competitive activity, but rival ownership provides motivation for them to go a step further and actually discourage strategic competitive activity. Ownership of firm rivals provides transient owners with incentive to pressure firms to limit strategic competitive actions. When ownership of rivals is low, transient institutional investors follow the earlier pattern of encouraging strategic competitive activity but at a decreasing rate, applying pressure with the threat of exit. When rival ownership is high, transient institutional investors have reason to pressure firms to avoid strategic competitive activity, because they can benefit from mutual forbearance. Thus, the earlier pattern of a decreasing positive relationship between transient owners and strategic competitive activity is dampened in the presence of rival ownership, and may even reach an inflection point

when there are a large number of transient institutional investors with stakes in rival firms. That is, when rival ownership is high transient institutional investors may reach a point where they discourage strategic competitive activity.

Rival ownership changes the nature of the principal-agent relationship. When rival ownership is low, transient institutional investors become decreasingly tolerant of strategic competitive activity and use the threat of exit to impose their desires to limit the increased use of strategic competitive actions. That is, they monitor to ensure that the agent is acting in the principal's best interest. However, when rival ownership is high, transient institutional investors can influence both firms to reduce competitive activity because it is not only in the owners' interest but also provides higher profits for each firm in the rivalry. Thus, when transient institutional investors own large percentages of both firms in a rivalry principal and agent interests are aligned, and they are in a position to convince firms to restrict strategic competitive activity for their own best interests.

The above arguments again suggest a curvilinear relationship between transient institutional investors and strategic competitive activity, but also suggest a possible inflection point where the relationship becomes negative. This yields an inverted-U shaped relationship.

> *H5: The curvilinear relationship between transient institutional ownership and the firm's level of strategic competitive activity is moderated by common transient institutional ownership of a firms' rival; the relationship becomes an inverted-U when common transient institutional ownership is high.*

CHAPTER IV

METHODOLOGY

Sample

The sample is a longitudinal data set of large U.S. firms. It consists of all dual-firm competitive rivalries in the Fortune 500 during the years 1997-2006, inclusive. In competitive dynamics research, dyadic rivalries exhibit a number of unique properties that make them a particularly interesting and useful subset of competitive relationships between firms (Cool et al., 1999; Derfus, Maggitti, Grimm, & Smith, 2008; Porac et al., 1995). First, competitive actions taken by a firm in a dyadic rivalry have a direct effect on the market share of the rival firm (Ferrier & Lee, 2002). So, dyadic rivalries naturally isolate competitive actions so that scholars may study them without the noise of a larger group of competitors and competitive activity (Ferrier et al., 1999). Second, the actors in dyadic rivalries are well defined, making it possible to study how specific characteristics of the actors affect competitive dynamics (Golden & Ma, 2003). Third, dyadic competitive rivalries allow scholars to consider the development of competitive dynamics over time because the actors generally do not change. Lastly, dyadic competitive rivalries may also exhibit unique properties, such as inter-organizational governance mechanisms, that influence the way firms compete. Two firms competing head-to-head, each with appreciable market share, is a common phenomenon in the marketplace (Yoffie & Cusumano, 1999), making the study of competitive rivalry an important scholarly concern.

Following prior research on market leaders and challengers, firms need to be ranked No. 1 and No. 2 in their industry in terms of sales and have Rumelt's specialization ratios greater than .70 to be included for analysis (Ferrier, 2001; Ferrier & Lee, 2002). This yields a set of single- and dominant-business firms that are acutely aware of each other's strategic competitive activity. Further, to analyze only dyadic rivalries, there is an additional restriction that both the No. 1 and No. 2 firms in the rivalry must hold at least a 15% share of the total market. This eliminates industries such as SIC code 4911 (electric utilities), where a dozen firms own somewhere between 1-3% of the market, so there is no obvious dyadic rivalry. Firms also need to be public because the hypotheses examine the influence of ownership structures. These restrictions yield a data set of 72 firms (i.e., 36 rivalries), as shown in Table 1. The sample is representative of a broad variety of industries. These firms accounted for an average of 66 percent of sales in their respective industries.

Compiling the data required three main types of data collection: that associated with boards, owners, and competitive dynamics. Board data were primarily available from the IRRC database. This database provided names and affiliations of the board members for all firms in the sampling window. Some years, however, were either missing or incomplete in the IRRC database, so I filled in missing data by gathering the information directly from the firm's DEF 14-A filing. CEO compensation data was available from Compustat's Execucomp database. This, too, was not complete, requiring missing CEO compensation data to also be collected from DEF 14-A filings. The archival sources had complete information for approximately 85% of the firm-years, with 15%

being collected from proxy statements. Control variables, including firm financial data, size, and industry context variables were compiled from Compustat.

TABLE 1
Fortune 500 Dyadic Competitive Rivalries, 1997-2006

SIC INDUSTRY NAME	FIRM A	FIRM B
1. ACCIDENT & HEALTH INS	UNUM	AFLAC
2. ADVERTISING AGENCIES	OMNICOM	INTERPUBLIC
3. AGRICULTURE – CROPS	DOLE FOOD	CHIQUITA BRANDS
4. AUTO SUPPLY STORES	AUTOZONE	ADVANCE AUTO PARTS
5. BAKERY PRODUCTS	FLOWERS FOODS	INTERSTATE BAKERIES
6. BOOK STORES-RETL	BORDERS	BARNES & NOBLE
7. CARPETS AND RUGS	SHAW INDUSTRIES	MOHAWK INDUSTRIES
8. CMP PROCESS,DATA PREP	FIRST DATA	AUTO. DATA PROCESSING
9. COMPUTERS & S/W-WHSL	TECH DATA	INGRAM MICRO
10. DPMT STORES	J.C. PENNEY	FEDERATED
11. DRUGS - WHSL	MCKESSON	CARDINAL HEALTH
12. ELECTRONIC PARTS-WHSL	AVNET	ARROW ELECTRONICS
13. GAS & OTHER SERV	UGI	SEMPRA ENERGY
14. GEN MED & SURG HOSP	HCA	TENET HEALTHCARE
15. GRAIN MILL PRODUCTS	KELLOGG	GENERAL MILLS
16. HOSPITAL & MED SVC PLANS	CIGNA	AETNA
17. INDL INORGANIC CHEM	PRAXAIR	AIR PRODUCTS
18. LUMBER & BLDG-RETL	LOWE'S	HOME DEPOT
19. MED, DNTL, HOSP EQ-WHSL	SCHEIN HENRY	OWENS & MINOR
20. METAL CANS	BALL CORP	CROWN HOLDINGS
21. METALWORKING MACH	BLACK & DECKER	ILLINOIS TOOL WORKS
22. MISC AMUSEMENT & REC	MGM MIRAGE	HARRAHS
23. OFFICE SUPPLY – RTL	STAPLES	OFFICE DEPOT
24. PERFUME & COSMETIC	AVON	COLGATE-PALMOLIVE
25. PRIM SMELT	ASARCO	PHELPS DODGE
26. PROF & COML EQ-WHSL	FISHER SCIENTIFIC	IKON OFFICE SOLUTIONS
27. PUBLIC BLDG & FURN	LEAR	JOHNSON CONTROLS
28. CONS ELECTR STORES	CIRCUIT CITY	BEST BUY
29. RAILROADS,LINE-HAUL	BNSF	UNION PACIFIC
30. REFUSE SYSTEMS	ALLIED WASTE	WASTE MANAGEMENT
31. RUBBER & PLASTIC FOOTWR	REEBOK	NIKE
32. SKILLED NURSING CARE FAC	KINDRED HEALTHCARE	BEVERLY ENTERPRISES
33. REFIN NONFER METAL	OM GROUP	ALERIS
34. SPCL CLEAN,POLISH PREPS	ECOLAB	CLOROX
35. SURGICAL,MED APPARATUS	BECTON DICKINSON	BAXTER INTERNATIONAL
36. TITLE INSURANCE	FIRST AMERICAN	FIDELITY NATIONAL

Ownership data were available from the CDA/Spectrum database. This database compiles information from SEC forms 13-F, which is a quarterly listing of major stock holders. The database allows this information to be reverse-compiled in order to collect data about all firms owned by a particular investor. This provides the raw information necessary to code investors as dedicated, transient, or quasi-indexer, in accordance with Bushee's (1998) categorizations. One of the problems with ownership data is that archival databases do not identify investors at the level of the individual fund, but rather at the level of the fund family. Bushee's (1998) categorizations partially obviate this problem because they describe investors in terms of their trading history.

Bushee (2001) classifies investors based on their investment time horizon using a combined factor analysis and cluster analysis. First, three factors describe each institutional investor. These are (1) the level of portfolio diversification, (2) portfolio turnover, and (3) the investor's trading sensitivity. Portfolio diversification is a composite measure of the average percentage of the institution's holdings invested in each firm, the average size of the institution's ownership position in its portfolio of firms, the percentage of holdings invested in firms greater than 5 percent, and a Herfindahl concentration index. Portfolio turnover is also a composite of the annual change in ownership positions and the percentage of firms that the investor has held continuously for at least two years. Lastly, trading sensitivity combines a ratio of changes in ownership position to firm's earning announcements with the average earnings change in firms bought minus firms sold.

These variables are then entered into a k-means cluster analysis on the factors to obtain a final separation into groups. Transient institutions have high portfolio turnover

and more diversified portfolios. Dedicated institutions have low turnover and concentrated holdings. For the sample of this dissertation, there were a total of 1,302 one-percent institutional investors. 100 of these were at some point during the sampling window classified as dedicated institutional investors and 383 were classified as transient. The mean number of dedicated institutional investors per firm is 1.9, and they hold an average of 11.9% of the firm's total shares. The mean number of transient institutional investors per firm is 4.6, and they hold an average of 10.1% of the firm.

Lastly, I collected competitive dynamics data through a Lexis-Nexis search, coding news articles similar to prior competitive dynamics research (Derfus et al., 2008; Ferrier & Lee, 2002). Competitive actions are considered to be any newsworthy move initiated by a firm to enhance its competitive position. Most definitions of what this includes parallel that of Ferrier, Smith, and Grimm as "all externally directed, specific, and observable newly created moves initiated by a firm to enhance its competitive position" (1999: 378). Actions that are observable to outsiders are most likely to be reported in the business press, so the Lexis-Nexis search was focused on business news publications (Derfus et al., 2008). This includes major business newspapers (e.g., *Investor's Business Daily* and *The Wall Street Journal*), aggregate news sources (e.g., *Marketwatch* and *Global News Wire*), business newsmagazines (e.g., *Business Week* and *Advertising Age*), and newswires (e.g., *Associated Press* and *Thomson Financial News*). It also includes more regional versions of these same source types (e.g., *Xinhua Economic News Service* and *The Business Times of Singapore*).

A headline is considered to report a strategic competitive action when the action has three components. First, it must involve significant commitment of specific assets

(Galbraith & Kazanjian, 1986), most typically a financial investment or some other commitment of fixed assets. Second, the action must be difficult to implement (Hambrick et. al, 1996). Actions that are difficult to implement are more strategic because they are more difficult for rivals to imitate. One way that an action may be difficult to implement may be that it takes time. Strategic competitive actions almost universally have longer time horizons than tactical actions (Miller & Chen, 1996; Wernerfelt & Karnani, 1987). Third, for an action to be strategic it must be difficult to reverse (Hambrick et al., 1996; Smith et al., 1992). Chen and Macmillan (1992) describe how the extent to which an action is irreversible contributes to its interpretation as a strategic commitment.

As an example of what constituted a strategic action, alliances were considered strategic only when they involved a commitment of assets to offer a new product or service. Another example, opening or closing a distribution center, was typically considered strategic because it disrupted established delivery mechanisms, but opening or closing a store was not strategic because that was more commonplace and easier to implement. Offering a new product or service was not strategic unless it was fundamentally different from the firm's existing product and service offerings. In general, actions fell into one of several broad categories: product, service, subsidiary establishment/divestment, acquisition, alliance, supply chain/distribution/capacity, organizational restructuring, and technological investment. The most common actions were acquisitions and the least common were major technology investments.

Headline searches for the 72 firms in this sample yielded 48,354 Lexis-Nexis headlines during the years 1997-2006. I read the "expanded list" version of each of these headlines, which includes both the headline and some additional information such as the

source, author, date, and the first few lines of the story. Reading the headlines of each firm in chronological order allowed me to go deep into the life of the firm and make more accurate decisions about strategic actions than would be provided by structured content analysis. Based on the headlines, I identified 1,254 articles that described unique strategic competitive actions. Only the earliest report of an action was recorded. On average, firms undertook 17.4 strategic actions over the course of the ten year sampling window. As a check, an independent coder read all of the headlines for a random sample of 10% of the firms in the data set (i.e., eight firms), selecting out those headlines that reported strategic competitive actions. Agreement between coders for this random subsample using the intraclass correlation coefficient (ICC) (Schrout & Fleiss, 1979) was 94.7%. The raters discussed and came to agreement on all cases where they coded actions differently, finding that such cases primarily emerged when the headline and article were not clear about the magnitude of the firm's investment necessary to implement the action.

Measures

Dependent Variable. This is a composite measure designed to capture the extent of strategic competitive activity by considering both the number of actions and the significance of those actions. Prior research in competitive dynamics has measured total competitive activity, operationalized as the number of competitive actions initiated by a firm in a given period of time (Derfus et al., 2008; Ferrier et al., 1999). Therefore, the first dependent variable is a count variable of the number of *strategic competitive actions* initiated for every firm in every year of the data set.

However, all strategic competitive actions do not have equal significance. Given a firm's number of competitive actions, it is helpful to provide added variance by

combining this information with the significance of each action. Therefore, each action was coded for its irreversibility to indicate the ability of the firm to change course after implementing the action. An action may be irreversible if overturning the action would involve significant commitment of resources, disruption of staff or processes, negotiations with unions or external parties, negative publicity, or institutional bureaucracy (Chen & Macmillan, 1992). Two individuals independently coded each of the strategic competitive actions, rating them on a five point scale of irreversibility (1 = very low, 5 = very high). Agreement between raters using the ICC (Shrout & Fleiss, 1979) was 79.7%. The raters then discussed all actions where they coded irreversibility with more than one point difference to come to mutual agreement on a score, resulting in a final agreement between raters of 83.3%. This allowed for creation of a composite score of *strategic competitive activity,* where each action is multiplied by its irreversibility and the results are summed annually by firm. For strategic competitive actions where the irreversibility scores of the two coders disagreed by a single point, the lower score prevailed.

Independent Variables. Most of the independent variables revolve around institutional ownership. This includes all institutional owners with at least 1 percent equity, which removes owners with marginal equity positions (Johnson & Greening, 1999; Tihanyi et al., 2003). The level *of dedicated (transient) institutional ownership* is operationalized as the percentage of outstanding shares of each firm that are owned by investors categorized as dedicated (transient). Hypotheses 4 and 5 address common institutional ownership of the rival firm. *Common dedicated (transient) institutional ownership of rival* is operationalized as the percentage of the rival firm's total shares that

are owned by dedicated (transient) institutional investors who also own at least 1 percent of the focal firm.

Scholars have not yet operationalized *board representation* of dedicated institutional owners. I measured this as a count variable, increasing by one for each director that specifically represents a dedicated institutional investor. A director specifically represents a dedicated institutional investor when they have been elected to the board at the request of one particular investor. I gathered this information from firm proxy statements and Lexis-Nexis.

Control Variables. Prior research indicates that a range of variables beyond those described in the hypotheses may affect competitive activity. Therefore, a number of control variables are included in the analysis. Some firm characteristics may influence competitive activity. For example, large firms may have greater resources and therefore be more likely to engage in competitive activity, so *firm size* controls for this with the natural logarithm of the total number of employees. More important, however, is the ability of the firm to undertake strategic competitive activity. Therefore, *financial slack* controls for ability with a measure of unabsorbed slack using the quick ratio. This is a ratio of current assets less inventory to current liabilities (Ferrier, 2001). Similarly, strategic competitive activity may be a function of how well, or poorly, a firm is performing. *Past performance* is therefore included as a control using a measure of each firm's lagged return on sales (ROS) (Wiersema & Bantel, 1992).

Industry level variables may also have a confounding influence on the dependent variable. Firms may be more likely to engage in strategic competitive activity in industries that are growing because such industries provide a greater chance of success. I

control for *industry growth* with the rate of the percentage change in industry gross sales between the focal and the previous period for each four-digit SIC category. *Industry concentration* is so closely connected with strategic competitive activity that it is sometimes used as a proxy to control for the competitiveness of an industry. An inverse-Herfindahl index controls for industry concentration for each four-digit SIC category of the panel data set (Marquis, 2003).

The generalized motivation for this study is to consider the influence of governance on competitive dynamics between firms. Therefore, it is important to control for other governance mechanisms that could confound examination of the effects of institutional ownership. One important form of governance that affects firm strategies is that of executive compensation (Devers et al., 2007). *CEO compensation* is included as a control, measured as the total value of salary, bonus, and the granted value of stock options. CEOs that also serve as board chairs help establish strong leadership but also may promote entrenchment (Daily & Dalton, 1994). The effect of *CEO duality* on firm strategies is complex, so it is also included as a dummy control variable (Boyd, 1995). Table 2 summarizes the variables described above.

TABLE 2
Summary of Variables

Variable	Type	Operationalization
Dependent		
Number of strategic competitive actions	count	Count of strategic competitive actions.
Strategic competitive activity	weighted count	Count of strategic competitive actions, with each action multiplied by a score from 1 to 5 to indicate its irreversibility.
Independent		
Dedicated institutional ownership	continuous	Percentage of outstanding shares owned by investors categorized as dedicated.
Transient institutional ownership	continuous	Percentage of outstanding shares owned by investors categorized as transient.
Moderators		
Board representation	count	Count variable of the number of directors that represent a specific dedicated institutional investor.
Common dedicated institutional ownership of rival	continuous	Percentage of the rival firm's total shares that are owned by dedicated institutional investors who also own at least 1% of the focal firm.
Common transient institutional ownership of rival	continuous	Percentage of the rival firm's total shares that are owned by transient institutional investors who also own at least 1% of the focal firm.
Controls		
Firm size	continuous	ln(number of employees)
Financial slack	continuous	Quick ratio
Past performance	continuous	ln(return on sales), lagged
Industry growth	continuous	Percentage change in industry gross sales for each four-digit SIC
Industry concentration	continuous	Inverse-Herfindahl index for each four-digit SIC
CEO compensation	continuous	Combined salary, bonus, and options in millions
CEO duality	dummy	1 if CEO is also the board chair

TABLE 3
Descriptive Statistics

Variable Name	Mean[b]	s.d.[b]	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Strategic actions	1.81	1.99														
2. Weighted strategic actions	4.90	5.31	.95													
3. Financial slack	1.32	.71	.05	.04												
4. Firm performance	.04	.05	.19	.17	-.14											
5. Firm size	3.31	.98	.23	.21	-.08	.01										
6. CEO compensation (Mil)	7.73	8.99	.33	.31	-.06	.13	.26									
7. CEO duality	.72	.45	.04	.05	.02	.01	.05	.02								
8. Industry growth[a]	.14	.21	.07	.06	.00	.05	.06	.18	-.02							
9. Industry concentration	.27	.14	.03	.01	.25	-.06	-.12	-.01	-.09	.08						
10. Dedicated ownership[a]	11.93	10.5	.06	.06	.10	-.06	.05	-.05	.09	-.04	-.11					
11. Transient ownership[a]	10.07	9.80	-.13	-.11	.09	-.16	-.01	.03	.02	-.06	.03	-.04				
12. Transient ownership squared[a]	1.88	.11	-.09	-.09	.06	-.10	-.03	-.04	.01	.00	.07	-.09	.63			
13. Cmn dedicated ownership of rival[a]	4.08	6.31	-.10	-.09	-.06	.01	-.12	-.05	-.05	-.07	.03	.13	.06	.06		
14. Dedicated ownership x cmn dedicated ownership of rival[a]	.59	1.29	-.14	-.13	.05	-.05	-.01	-.15	.04	.01	-.04	-.02	-.06	-.03	.12	
15. Cmn transient ownership of rival[a]	2.97	5.43	-.06	-.05	.01	-.05	-.04	.00	.04	-.05	-.01	-.02	.34	.28	.01	.06
16. Transient ownership x cmn transient ownership of rival[a]	.49	1.23	-.04	-.05	-.01	-.03	-.03	-.01	.02	.00	.05	-.09	.31	.47	-.07	-.03
17. Transient ownership squared x cmn transient ownership of rival[a]	.11	.01	-.07	-.07	.02	-.07	-.05	-.01	.05	-.01	.02	-.07	.41	.56	-.03	.00
18. Year 1998	.10	.30	.03	.05	-.01	.05	-.06	-.08	.03	.08	-.09	.24	-.14	-.09	.09	.04
19. Year 1999	.10	.30	-.01	-.00	-.04	-.06	-.02	-.03	-.04	.04	-.05	-.33	-.09	-.11	-.21	.16
20. Year 2000	.10	.30	-.01	-.03	-.04	-.04	.00	.00	-.06	-.05	-.05	.04	-.10	-.08	.04	-.04
21. Year 2001	.10	.30	-.03	-.05	.00	-.03	.03	.04	-.10	-.08	.00	.06	-.08	-.08	.04	-.04
22. Year 2002	.10	.30	-.06	-.07	.01	-.07	.03	-.01	-.02	-.08	.00	.07	.22	.13	.06	-.05
23. Year 2003	.10	.30	-.03	-.03	.02	.01	.02	.01	.02	-.02	.00	.07	.21	.08	.12	-.02
24. Year 2004	.10	.30	.01	.01	.02	.02	.02	.03	.03	.01	.03	.03	-.01	-.03	.04	.04
25. Year 2005	.10	.30	.05	.06	.00	.04	.03	.06	.06	-.03	.09	-.21	.38	.28	-.11	-.01
26. Year 2006	.10	.30	.15	.15	.00	.08	.05	.13	.00	.16	.18	-.18	-.22	-.06	-.09	-.03

TABLE 3, continued

Variable Name	15	16	17	18	19	20	21	22	23	24	25
16. Transient ownership x cmn transient ownership of rival[a]	.48										
17. Transient ownership squared x cmn transient ownership of rival[a]	.62	.78									
18. Year 1998	-.09	-.06	-.06								
19. Year 1999	-.09	-.06	-.06	-.11							
20. Year 2000	-.09	-.06	-.06	-.11	-.11						
21. Year 2001	-.12	-.06	-.07	-.11	-.11	-.11					
22. Year 2002	.07	-.02	.00	-.11	-.11	-.11	-.11				
23. Year 2003	.06	-.04	-.02	-.11	-.11	-.11	-.11	-.11			
24. Year 2004	-.08	-.05	-.05	-.11	-.11	-.11	-.11	-.11	-.11		
25. Year 2005	.52	.45	.43	-.11	-.11	-.11	-.11	-.11	-.11	-.11	
26. Year 2006	-.12	-.03	-.06	-.11	-.11	-.11	-.11	-.11	-.11	-.11	-.11

[a] These variables are expressed as percentages.
[b] Means and standard deviations for the main effects are for the uncentered variables to facilitate interpretation.
* Correlations greater than .08 or less than -.08 are statistically significant ($p < .05$).

Analysis

Table 3 reports the inter-correlation matrix and descriptive statistics of all variables in this study. All correlations are shown for centered predictor variables, but the means and standard deviations are reported uncentered to facilitate interpretation. The mean number of strategic actions undertaken by firms in the data set is 1.8 per year. When these actions were weighted for irreversibility, the mean was 4.9, so the average irreversibility score for strategic actions was 2.7. Home Depot took largest number of strategic actions in the data set in 2006 when they acquired new operations in China, revamped store designs, and expanded their commitment to new product and service offerings such as consumer financing and contractor supply. Most firms had at least one year in the sampling window during which they initiated zero strategic competitive actions.

On average, firms had positive performance of 4% as measured by return on sales, and experienced positive return on sales an average of 9 out of the 10 years in the sampling window. Overall, industries in which these firms compete grew at a rate of 14% per year. The highest performing firms were in the computer data processing industry (SIC 7374) and the lowest performing firms were in metalworking and refining (SICs 3330 and 3540). A mean quick ratio of 1.3 for all firms indicated a relatively small amount of average financial slack. CEOs in this sample netted an average of $7.7 million per year, including stock options, and more often than not also served as Chairman of the Board.

Correlations between variables suggested no problems of multicollinearity. The highest correlations came about with inclusion of the quadratic term and with interactions

that included the quadratic, because these variables were derived from measured variables. However, all correlations not including the quadratic were below .50. As should be expected, correlations between firm size and the year dummy variables increase as the year increases, showing that the firms are getting bigger over time. The same is true of CEO compensation, showing that CEOs are steadily earning more money each year. The level of dedicated and transient institutional ownership also showed some correlation with specific years, but there was no obvious trend in the direction as either increasing or decreasing over time.

The dependent variable, *number of strategic competitive actions*, is described by a non-negative integer count variable. Applying linear regression to count outcomes can result in inconsistent and biased estimates because the underlying distribution violates the normality assumption (Long & Freese, 2006). Poisson-distributed variables can approach normality when the mean is very high (Cohen, Cohen, West, & Aiken, 2003), but the mean annual number of strategic competitive actions undertaken by a firm was small (Chen et al., 1992), so normality is not a safe assumption to make of the dependent variable. A better approach is to use a Poisson or negative binomial regression model. The use of such models for count outcomes, including those derived from panel data, is common in strategic management literature (e.g., Ahuja & Katila, 2004; Penner-Hahn & Shaver, 2005). A likelihood ratio test of overdispersion indicated the dependent variable is more closely aligned with the negative binomial distribution rather than the Poisson distribution. The more detailed dependent variable, *strategic competitive activity*, is a weighted count of the number of strategic competitive actions. Weighted counts follow distributions similar to count variables (Dushnitsky & Lenox, 2005; Lerner, 2005), and

this dependent variable is also overdispersed, suggesting negative binomial regression is the most appropriate technique.

I observe each firm ten times, pooling observations across years. Pooling repeated observations may violate negative binomial regression's assumption of independence. This could yield autocorrelation of the model's residuals and incorrect variance estimates. Therefore, following Certo and Semadeni (2006), all models include time dummy variables coded for each year in the analysis. Further, using random effects negative binomial models ensures that error due to serial correlation in the panel data set is also specified and analyzed (Greve, 2003). All independent variables are centered before being added into the models to reduce potential for multicollinearity.

Table 4 reports the results for random effects negative binomial regression using the initial dependent variable: number of strategic competitive actions. The first model shows the influence of the selected control variables. As expected, a firm's past performance is an important predictor of its strategic competitive actions. Firm size is also a statistically significant predictor, with large firms being more likely to implement strategic competitive actions. Similarly, CEO compensation predicts the number of strategic competitive actions, with higher paid CEOs implementing a greater number of actions. Other control variables were not statistically significant, and have also not yielded systematic results in prior competitive dynamics studies (Derfus et al., 2008; Ferrier, 2001). For example, consistent with Lee, Smith, Grimm, and Schoenberg (2000), I find that industry concentration is not correlated with, nor is a good predictor of, the number of competitive actions.

TABLE 4
Results of random-effects negative binomial regression with action count as DV

N = 682	Model							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Financial slack	.07	.06	.07	.07	.07	.08	.08	.08
	(.07)	(.07)	(.07)	(.07)	(.07)	(.07)	(.07)	(.07)
Firm performance	3.61 ***	3.90 ***	3.48 ***	3.48 ***	3.48 ***	3.53 ***	3.46 ***	3.44 ***
	(1.02)	(1.02)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Firm size	.24 ***	.22 ***	.21 ***	.21 ***	.20 ***	.21 ***	.20 ***	.20 ***
	(.06)	(.06)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)
CEO compensation	.82 **	.90 **	1.08 ***	1.11 ***	1.19 ***	.89 **	.91 **	.91 **
	(.27)	(.27)	(.27)	(.28)	(.28)	(.31)	(.31)	(.31)
CEO duality	.06	.04	.04	.04	.03	.04	.04	.04
	(.09)	(.08)	(.08)	(.08)	(.09)	(.09)	(.08)	(.08)
Industry growth	-.03	-.02	-.02	-.03	-.07	-.04	-.04	-.04
	(.17)	(.17)	(.16)	(.17)	(.17)	(.17)	(.17)	(.17)
Industry concentration	-.03	.03	.04	.03	.04	-.01	-.03	-.04
	(.37)	(.37)	(.36)	(.36)	(.36)	(.36)	(.36)	(.36)
Dedicated ownership		1.46 ***	1.35 ***	1.37 ***	1.39 ***	1.33 ***	1.37 ***	1.37 ***
		(.44)	(.44)	(.44)	(.44)	(.43)	(.43)	(.43)
Transient ownership			-1.74***	-1.94***	-1.93***	-2.07***	-2.07***	-2.08***
			(.55)	(.65)	(.65)	(.65)	(.64)	(.65)
Transient ownershp squared				2.50	2.78	2.81	3.23	5.57
				(4.05)	(4.04)	(4.02)	(4.04)	(4.46)
Rival dedicated ownership					-1.28	-.95	-.95	-1.02
					(.73)	(.73)	(.73)	(.73)
Dedicated ownership x rival dedicated ownership						-13.27*	-13.05*	-13.65**
						(5.80)	(5.79)	(5.81)
Rival transient ownership							-.88	-.26
							(.88)	(1.04)
Transient ownership x rival transient ownership								-4.04
								(10.22)
Transient ownership squared x rival transient ownership								-33.98
								(61.22)
Time dummy variables	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*
-2 log likelihood	2338	2326	2316	2316	2314	2308	2306	2306
Wald Chi-Sq	92.8	104.9	117.0	117.5	120.5	129.6	131.4	132.8
degrees of freedom	16	17	18	19	20	21	22	24

* p < .05, ** p < .01, *** p < .001

Hypothesis 1 states that a firm's level of ownership by dedicated shareholders is positively associated with the number of their strategic competitive actions. Model 2 reports the regression results that examine this relationship. As shown in the table, the coefficient for dedicated institutional ownership is 1.46, which is statistically significant

($p < .001$). Therefore, there is a positive association between the level of dedicated institutional ownership and the number of strategic competitive actions initiated by firms in this sample. H1 is supported. The Wald chi-square of this model improves to 104.9 (17 d.f.) from an earlier value of 92.8 (16 d.f.) when only the control variables were incorporated. This is a statistically significant improvement, suggesting a better overall model fit when we include the level of dedicated institutional ownership.

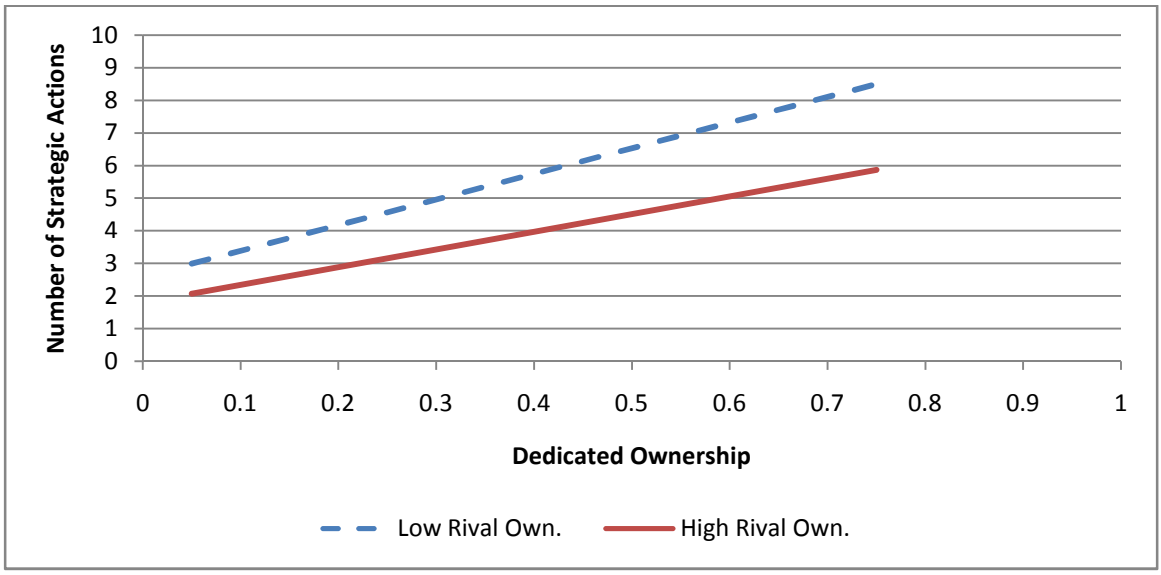
Hypothesis 2 considered the relationship of transient shareholders on the same dependent variable, positing a curvilinear relationship. As shown in Models 3 and 4, the predicted shape of the relationship can be tested in negative binomial regression by first testing the main effect of transient shareholders and then adding the squared term into the model to examine nonlinear effects (Tuschke & Sanders, 2003). Model 3 tests the main effect alone, revealing a negative association between the level of transient ownership and a firm's strategic competitive actions ($p < .001$). Although not hypothesized, this is a statistically significant result in itself, and addition of transient institutional ownership into the model increases overall model fit to a Wald chi-square of 117.0 (18 d.f.). However, adding the squared term in Model 4 did not change the main effect and had no effect on the model fit. This suggests the relationship between transient institutional ownership and strategic competitive activity does not have a curvilinear component, so H2 is not supported.

Hypothesis 3 stated the relationship between dedicated institutional ownership and the number of strategic competitive actions would be strengthened when those owners had representation on the board of directors. However, only three firms in the data set had a person that was placed on the board specifically at the behest of a dedicated

institutional investor, and these occurred late in the sampling window. These three were Kirk Kerkorian, Ralph Whitworth, and Carl Icahn, all of whom had representatives on firms in the data set. From a qualitative perspective, there may be some support for the notion that having board representation allowed these investors to more strongly voice their opinions about strategic competitive activity at firms included in this data set. For example, Whitworth's Relational Investors appeared to have a strong influence on the many strategic competitive actions undertaken by Home Depot. Kerkorian's Tracinda Investment Group virtually transformed MGM Mirage into the largest gambling operation in Las Vegas with several multi-billion dollar projects and acquisitions. However, despite this anecdotal evidence, three data points were not enough to examine the influence of dedicated institutional investors having board representation. There was, therefore, insufficient variance to test hypothesis 3.

The final two hypotheses tested interaction effects. H4 suggested the relationship between dedicated institutional owners and the number of strategic competitive actions would be dampened by common dedicated ownership of the firm's rival. This interaction was tested in Models 5 and 6 and is depicted in Figure 1. The direct effect was added first and was not statistically significant. However, adding the interaction term in Model 6 showed that dedicated institutional ownership of a firm's rival changes the relationship between dedicated institutional investors and strategic competitive actions. Stated differently, when dedicated institutional ownership of the focal firm and its rival increase together, strategic competitive activity is lessened. Hypothesis 4, therefore, is supported. The sign and significance of the direct effects did not change as a result of including the interaction term. The overall model fit improves to a Wald chi-square of 129.6 (21 d.f.).

FIGURE 1
Interaction between Dedicated Ownership of the Focal Firm and its Rival



Hypothesis 5 suggested the relationship between transient institutional owners and the number of strategic competitive actions would also be dampened by common transient ownership of the firm's rival. In this case, H5 posited that the interaction would bring about an inverted-U shaped relationship with the dependent variable. Wu, Levitas, and Priem (2005) examine a methodologically similar hypothesis, testing the direct and curvilinear effects first, followed by interactions with both the simple and quadratic terms in a moderating model. The direct effect of the moderating variable, transient institutional ownership of the rival firm, is tested in Model 7 and shown to be not statistically significant. Thus, higher transient institutional ownership of a rival firm does not directly influence strategic competitive activity of the focal firm. The interaction effects are then entered in Model 8 (Wu et al., 2005) and again are not statistically significant and do not improve model fit. Transient ownership of the rival firm, therefore, did not have the same

dampening effect on the relationship between transient institutional ownership and strategic competitive activity. Hypothesis 5 did not receive support.

A weighted count of strategic actions served as an alternative dependent variable. The results, again using random effects negative binomial regression, are shown in Table 5. There are no appreciable differences using this more specific dependent variable, except that it picks up the influence of financial slack. This seems to indicate that as firms gain additional financial slack they do not necessarily take more strategic actions, but the actions they do take are less reversible. We also gain a better overall model fit for this DV, with a final Wald Chi-Square of 164 as compared to 133 for the unweighted DV. Support for the hypotheses remains the same, supporting hypotheses 1 and 4 but not supporting hypotheses 2 and 5.

The random effects models reported in tables 4 and 5 are more efficient than their fixed effects counterparts because they use information about variation within firms and variation between firms. However, some have advocated that fixed effects models may be preferred because they effectively control for all possible firm characteristics that do not change over time (Allison, 2005). A Hausman test revealed that the Hausman statistic was not statistically significant, suggesting that differences in the coefficients provided by random and fixed effects models are not systematic. Therefore, random effects models are preferred because they conserve degrees of freedom. However, results of the fixed effects models are reported in Table 6, where it is seen that significance levels of the coefficients are not substantively different from random effects models, but the overall model fit is lessened.

TABLE 5
Results of Random-Effects Negative Binomial Regression with *Weighted* Action Count as DV

N = 682	**Model**							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Financial slack	.13 *	.11 *	.13 *	.13 *	.12 *	.14 *	.14 *	.14 *
	(.06)	(.06)	(.06)	(.06)	(.06)	(.06)	(.06)	(.06)
Firm performance	4.11 ***	4.35 ***	3.92 ***	3.90 ***	3.94 ***	3.98 ***	3.91 ***	3.91 ***
	(.92)	(.92)	(.92)	(.92)	(.92)	(.92)	(.92)	(.92)
Firm size	.23 ***	.21 ***	.20 ***	.20 ***	.19 ***	.20 ***	.19 ***	.19 ***
	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)
CEO compensation	.89 ***	1.01 ***	1.13 ***	1.17 ***	1.24 ***	1.25 ***	.94 ***	.94 ***
	(.28)	(.28)	(.28)	(.28)	(.28)	(.28)	(.31)	(.31)
CEO duality	.15	.14	.12	.12	.12	.13	.13	.13
	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)
Industry growth	-.01	.01	.01	.01	-.02	.01	.01	.01
	(.18)	(.18)	(.18)	(.18)	(.18)	(.18)	(.18)	(.18)
Industry concentration	.05	.05	.04	.03	.05	-.02	-.07	-.08
	(.33)	(.32)	(.32)	(.32)	(.32)	(.32)	(.32)	(.32)
Dedicated ownership		1.38 ***	1.35 ***	1.37 ***	1.41 ***	1.34 ***	1.42 ***	1.43 ***
		(.42)	(.42)	(.42)	(.42)	(.42)	(.41)	(.41)
Transient ownership			-1.42 **	-1.68 **	-1.63 **	-1.76 **	-1.74 **	-1.77 **
			(.56)	(.66)	(.66)	(.66)	(.66)	(.66)
Transient ownershp squared				3.02	3.20	3.21	3.84	7.29
				(4.09)	(4.09)	(4.06)	(4.06)	(4.47)
Rival dedicated ownership					-1.16	-.68	-.61	-.69
					(.74)	(.75)	(.75)	(.75)
Dedicated ownership x rival dedicated ownership						-13.20*	-12.99*	-13.61**
						(5.82)	(5.81)	(5.80)
Rival transient ownership							-1.37	-.27
							(.93)	(1.09)
Transient ownership x rival transient ownership								-4.84
								(10.76)
Transient ownership squared x rival transient ownership								-58.21
								(64.26)
Time dummy variables	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*
-2 log likelihood	3528	3516	3510	3510	3510	3502	3500	3496
Wald Chi-Sq	123.2	136.7	145.0	145.2	146.1	158.5	162.1	164.0
degrees of freedom	16	17	18	19	20	21	22	24

* p < .05, ** p < .01, *** p < .001

TABLE 6
Results of Fixed-Effects Negative Binomial Regression with *Weighted* Action Count as DV

N = 682	**Model**							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Financial slack	.09	.09	.08	.08	.08	.10	.11	.11
	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)
Firm performance	4.31 ***	4.59 ***	4.40 ***	4.38 ***	4.41 ***	4.52 ***	4.44 ***	4.37 ***
	(1.24)	(1.27)	(1.26)	(1.26)	(1.26)	(1.26)	(1.27)	(1.27)
Firm size	.35 ***	.33 ***	.32 ***	.32 ***	.32 ***	.34 ***	.34 ***	.34 ***
	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
CEO compensation	.65 *	.74 *	.88 **	.96 **	1.04 ***	.71 *	.72 *	.72 *
	(.33)	(.33)	(.34)	(.34)	(.34)	(.37)	(.37)	(.37)
CEO duality	.14	.12	.12	.12	.11	.12	.12	.13
	(.10)	(.10)	(.10)	(.10)	(.10)	(.10)	(.10)	(.10)
Industry growth	-.08	-.06	-.06	-.08	-.12	-.09	-.10	-.11
	(.19)	(.19)	(.19)	(.19)	(.19)	(.19)	(.19)	(.19)
Industry concentration	.11	.09	.15	.14	.14	.07	.01	-.02
	(.50)	(.50)	(.50)	(.50)	(.50)	(.51)	(.51)	(.51)
Dedicated ownership		1.19 *	1.10 *	1.13 *	1.15 *	1.13 *	1.17 *	1.17 *
		(.50)	(.50)	(.50)	(.50)	(.49)	(.49)	(.49)
Transient ownership			-1.27 *	-1.71 *	-1.69 *	-1.82 *	-1.83 *	-1.84 *
			(.61)	(.74)	(.74)	(.74)	(.74)	(.74)
Transient ownershp squared				4.55	4.81	4.82	5.52	8.96
				(4.31)	(4.30)	(4.29)	(4.34)	(4.75)
Rival dedicated ownership					-1.18	-.79	-.83	-.93
					(.84)	(.84)	(.84)	(.84)
Dedicated ownership x rival dedicated ownership						-13.50 *	-13.48 *	-14.28 *
						(6.24)	(6.25)	(6.26)
Rival transient ownership							-1.15	-.04
							(.99)	(1.17)
Transient ownership x rival transient ownership								-3.33
								(11.63)
Transient ownership squared x rival transient ownership								-58.98
								(64.83)
Time dummy variables	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*	*Included*
-2 log likelihood	2898	2894	2890	2888	2886	2882	2880	2876
Wald Chi-Sq	80.4	85.2	90.3	92.8	92.7	101.4	102.9	105.5
degrees of freedom	16	17	18	19	20	21	22	24

* p < .05, ** p < .01, *** p < .001

Post-Hoc Analysis

A post-hoc analysis, reported in Table 7, addressed the issue of levels. There is an extent to which the data examined in this sample are nested within industries because firms were intentionally selected to reside in an industry with a rival firm in the same industry. Therefore, the data have 72 rivalries and 36 unique industries (i.e., rivalries). Estimates obtained in negative binomial regression are based on total correlations, but these may or may not be the same as the between-industry and within-industry correlations. Therefore, it could be important to control for industry factors that might influence the number of strategic actions firms undertake. Some of the existing control variables attempt to do so, namely industry growth and concentration. However, there may be other, less obvious industry factors affecting the dependent variable and biasing the results. One approach to capturing these industry differences is with random coefficients modeling. The combination of random coefficients and negative binomial modeling is new and is not yet incorporated into most software packages (Hilbe, 2007). However, using SAS software, I was able to conduct this analysis with the recently developed glimmix procedure.

In general, the prior results hold in multilevel analysis. These results represent the simple strategic action count because the same analysis with the weighted strategic action count failed to converge on a solution for any of the models except the controls. In fact, the models also failed to converge for the simple strategic action count without imposing certain conditions. First, the firm size control variable needed to be operationalized as the total number of employees rather than the natural logarithm of the total number of employees. Second, the quadratic term needed to be dropped from the analysis. Because

TABLE 7
Random Coefficients Negative Binomial Regression Model with Action Count as DV

N = 682	Model							
	1	**2**	**3**	**4 (N/A)**	**5**	**6**	**7**	**8**
Financial slack	.10	.09	.10		.11	.10	.10	.10
	(.07)	(.07)	(.07)		(.07)	(.07)	(.07)	(.07)
Firm performance	2.13 *	2.62 **	2.26 *		2.29 *	2.30 *	2.28 *	2.28 *
	(.98)	(1.02)	(1.00)		(1.00)	(.99)	(.99)	(1.00)
Firm size (num employees)	2.41 *	2.59 *	2.17 *		2.06	2.02	1.95	1.97
	(1.19)	(1.11)	(1.09)		(1.08)	(1.08)	(1.08)	(1.08)
CEO compensation	1.27 **	1.01 **	1.17 **		1.17 **	.93 *	.95 *	.91 *
	(.49)	(.39)	(.39)		(.39)	(.40)	(.40)	(.40)
CEO duality	.07	.03	.02		.02	.05	.05	.05
	(.09)	(.09)	(.09)		(.09)	(.09)	(.09)	(.09)
Industry growth	-.10	-.04	-.04		-.08	-.06	-.06	-.06
	(.19)	(.18)	(.18)		(.18)	(.18)	(.18)	(.18)
Industry concentration	-.31	-.30	-.28		-.24	-.27	-.29	-.27
	(.45)	(.44)	(.43)		(.43)	(.43)	(.43)	(.43)
Dedicated ownership		1.53 ***	1.50 ***		1.50 ***	1.45 ***	1.49 ***	1.48 ***
		(.45)	(.44)		(.44)	(.44)	(.44)	(.44)
Transient ownership			-1.82***		-1.81***	-1.94***	-1.92***	-1.85***
			(.55)		(.55)	(.55)	(.55)	(.55)
Transient ownershp squared					N/A	N/A	N/A	N/A
Rival dedicated ownership					-1.41	-1.17	-1.18	-1.22
					(.72)	(.72)	(.72)	(.72)
Dedicated ownership x rival dedicated ownership						-15.44**	-14.95**	-15.37**
						(5.85)	(5.86)	(5.87)
Rival transient ownership							-.76	-.50
							(.88)	(.91)
Transient ownership x rival transient ownership								-7.29
								(7.10)
Transient ownership squared x rival transient ownership								N/A
Time dummy variables	*Included*	*Included*	*Included*		*Included*	*Included*	*Included*	*Included*
-2 log likelihood	2048	1991	1977		1976	1962	1959	1952
degrees of freedom	16	17	18		20	21	22	24

* p < .05, ** p < .01, *** p < .001

the quadratic term was not statistically significant either as a main effect or in its interactions, this should not appreciably influence the results. Incorporating industry effects via multilevel analysis reduces the -2 log likelihood of the final model from 3496 down to 1952, suggesting an improved overall model fit. Taking into account the both

intra- and inter-industry variation appears to have made the influence of the ownership variables more pronounced and reduced the effects of prior performance, financial slack and CEO compensation. The results otherwise are substantively the same: hypotheses 1 and 4 are supported, while hypotheses 2 and 5 are not.

In summary, I analyzed the data in four separate ways, without substantive differences in the results. Initial analysis used random-effects negative binomial regression with an action count dependent variable. This demonstrated support for hypotheses 1 and 4 and also found a direct, negative relationship for hypothesis 2 rather than the expected curvilinear relationship. A second analysis used the weighted dependent variable, which picked up the influence of financial slack and otherwise produced the same results. A third analysis tested both the weighted and unweighted dependent variables using fixed effects negative binomial regression (for brevity, coefficients were not reported for unweighted). Although the results were similar, the model fit was not as good, and a Hausman test revealed the random effects model is preferred. A final, post-hoc analysis examined the weighted and unweighted dependent variables in a multilevel model. None of these models converged on a solution with the weighted dependent variable. Results with the unweighted dependent variable were generally as expected, indicating that variation between industries does not change the hypothesized relationships in a statistically significant manner. Table 8 summarizes these results.

TABLE 8
Summary of Results

Test	Findings[1]
Controls:	
1. Financial slack	1. Not significant (significant for random effects, weighted DV)
2. Past performance	2. Significant
3. Firm size	3. Significant (except in some multilevel models)
4. CEO compensation	4. Significant
5. CEO duality	5. Not significant
6. Industry growth	6. Not significant
7. Industry concentration	7. Not significant
H1: Dedicated ownership is positively associated with strategic competitive activity.	Supported.
H2: Transient ownership is curvilinearly associated with strategic competitive activity.	Not supported. Results showed support for a negative and direct effect.
H3: The relationship between dedicated owners and strategic competitive activity is moderated by owner representation on the board of directors.	Not tested.
H4: The relationship between dedicated owners and strategic competitive activity is moderated by common dedicated ownership.	Supported.
H5: The relationship between transient owners and strategic competitive activity is moderated by common transient ownership.	Not supported

[1] Findings hold for random effects, fixed effects, and multilevel modeling using either a weighted or unweighted dependent variable, unless otherwise indicated.

CHAPTER V

DISCUSSION

This dissertation showed a relationship between institutional ownership and competitive dynamics, lending support to the increasingly popular notion that many firm owners are intricately involved in the life of the firm (David, Bloom, & Hillman, 2007; Hoskisson et al., 2002). The results of this dissertation indicate that the reach of institutional investors extends beyond firm level strategies, such as diversification and compensation (Hartzell & Starks, 2003; Ramaswamy et al., 2002), to affect firm strategic actions. Specific types of institutional investors have different effects on the firm's actions, some fostering activity that will benefit the firm in the long run and others discouraging it. Institutional investors maintain ownership in a portfolio of firms; this study finds that when rivals reside together in that portfolio it affects the relationship between the owner and the firms. The following paragraphs discuss the findings of each hypothesis in more detail.

Dedicated institutional investors foster strategic competitive actions among firms in their portfolio. This likely owes to their long time horizons and their ability to offer patient capital in support of such activity. Strategic competitive actions are difficult to implement and have long-term payoffs. For example, General Mills, one of the firms in the data set, acquired the worldwide Pillsbury business in October 2001. As a result, earnings fell 48 percent in the third quarter of that year. In a 2002 article about the

acquisition progress, General Mills' CEO described the long payout and how it affects the rivalry as follows:

> Our transition to a new, combined sales organization handling the entire range of Pillsbury and General Mills products resulted in an unusually weak third quarter … this one-time disruption is now behind us, as volumes began improving in January and grew 3 percent in February … on the one hand our share is up and our sales are up. They're not up as much as Kellogg. I'd have to give Kellogg credit for being the strongest performer in the category this year … However, in 2003 we will benefit from a full 12 months of the acquired Pillsbury business (Mills, 2002).

Although painful in the short term, General Mills will be in a better position to compete with Kellogg over the long run. Dedicated institutional investors appear to have a greater tolerance for this kind of strategic competitive activity, and in fact may even be able to provide some of the resources necessary to implement such actions.

Transient institutional investors, on the other hand, are averse to strategic competitive actions due to their short investment horizons and the short-term inflexibility that often accompanies such actions. The hypothesized relationship was positive and curvilinear, but there are some reasonable explanations why the data reveal a direct and negative relationship. Transient institutional owners may discourage strategic competitive activity by relying on quick entry and exit as their investment strategy. These owners favor stock value gains that result from short-term performance improvements, and are therefore likely to be concerned about the short-term implications of strategic competitive activity. Transient owners often adjust or trade their portfolios on demand and may be deterred by announcements about strategic competitive activity that are likely to be coupled with negative short-term earnings. They also monitor industry trends and may favor firms that do not tend to implement a large number of strategic competitive actions. Transient institutional owners maintain primarily short-term holdings, so they will not be

involved with a firm long enough to realize the gains associated with strategic competitive activity. Therefore, the results indicate that firms with high levels of transient ownership tend to avoid such actions.

The relationship between dedicated institutional investors and strategic competitive activity changes when taking into account common ownership between firms in a rivalry. Increased dedicated institutional ownership of a firm's rival does not have a direct effect on strategic competitive activity of the focal firm. However, when common ownership in the focal firm and the rival firm increase together, firms reduce their level of their strategic competitive activity. This relationship indicates that dedicated institutional investors adopt a different posture toward firms in which they invest when they are also invested in the firm's rival. Common ownership puts these investors in a position where influencing one firm to take action that would increase market share would have a negative effect on the firm's rival, thereby canceling out benefits that would accrue to common owners. Further, there are costs associated with imposing pressure on firms to engage in strategic competitive activity. These include the campaign costs of rallying other owners to impose collective pressure or simply the time and energy associated with pressuring managers to take particular actions. Dedicated institutional owners are less likely to undertake these costs if one of the firms in their portfolio will benefit but another one of their firms will suffer.

Hypothesis 5 posited the same phenomena would occur with transient institutional investors, but results of this study reveal this was not the case. One possible explanation emerges from the analysis associated with Hypothesis 2, where results showed that transient institutional investors impose pressure on firms to avoid strategic competitive

actions that might yield negative short-term earnings. Given their focus on short-term earnings, there do not appear to be benefits associated with common ownership of the firm's rival. Influencing firms to limit their strategic competitive activity may provide short-term benefits to the firm's owners, which explains the direct negative relationship with transient ownership, but those short-term benefits remain whether or not those investors also own shares of the firm's rival. Another reason the inter-firm governance mechanism that arose from common dedicated institutional ownership does not come about with common transient owners may be because they do not keep their holdings long enough to allow any form of coordination.

The third hypothesis suggested that the twin governance mechanisms of institutional ownership and boards interact with each other. Dedicated institutional investors are making more of an effort get their representatives on the boards of firms in which they invest. According to FactSet SharkWatch, 30 U.S. firms ceded board seats to institutional investors in the first quarter of 2008, increasing from 23 in 2007 and nine in 2006. Unfortunately, given that this is a limited and more recent phenomenon, the data collected for this dissertation did not allow a direct test of owner representation on boards.

Governance and Agency Theory

The results presented here shed light on agency theory. The control variable of CEO compensation shows the expected agency theoretic prediction that as CEOs receive more pay (which is tantamount to receiving more stock options), their firms engage in more strategic competitive activity. This is because increased stock options make the CEO increasingly interested in taking actions that will improve the long-term competitive

position of the firm. In agency theory terms, it brings the CEO's incentives in line with those of shareholders. However, distinguishing between different types of shareholders reveals that the agency theory prediction is accurate for dedicated institutional investors, but not for transient institutional investors. These owners are more interested in short-term gains, and therefore the CEO's interests are not at all in line with those of transient owners. Recognizing differences in the preferences of heterogeneous shareholders is an important boundary condition of agency theory. This may help explain why empirical reviews of agency theory often uncover inconsistent results (e.g. Dalton et al., 2003). Prior research has found that shareholder differences change agency theory predictions (Hoskisson et al., 2002; Tihanyi et al., 2003), and this study adds to these arguments by providing a finer grain distinction between shareholders. "Pension funds" are typically either dedicated institutional investors or quasi-indexers. "Professional investment funds" can be on either end of the spectrum – dedicated or transient. Therefore, this study captures an additional degree of variance in shareholder differences.

Another important contribution of this study to agency theory is that the analysis dynamically captures principal interests. Agency theory was developed around the notion that shareholders have particular interests as a group (Jensen & Meckling, 1976). Scholars have also recognized the unique ability of institutional investors to see to it that their interests are being served, but have generally considered institutional investors as a group with common interests (e.g., Baysinger et al., 1991). Later research extended agency theory by recognizing that institutional investors are not all the same and may have divergent interests (Hoskisson et al., 2002; Tihanyi et al., 2003). These studies added to our understanding of agency relationships by revealing that different legal forms

of institutional ownership operate under unique fiduciary standards, with different types of competitive pressures and varying sensitivity to current performance. This dissertation further refines our understanding of these differences as it recognizes variation in terms of investment horizons and trading sensitivity that occurs within legal forms.

Further, institutional investors might change over time. This study does not categorize investors at the beginning of the sampling window, but instead categorizes institutional investors each year. Only one institutional investor, Friess Associates, was categorized as transient for the duration of the sampling window. Similarly, only one institutional investor, Capital Research and Management Company, was categorized as dedicated for the entire ten years. Most others occasionally moved between transient and quasi-indexer or dedicated and quasi-indexer. This analysis captured these differences and thus provided a more dynamic and homogeneous view of the interests of principals. An example is Ed Lampert's hedge fund, ESL Investments. For most of the years in the sample this fund was classified as dedicated. However, in 2003 ESL cut their stake in Autozone, one of the firms in the data set, by 20 percent, causing Autozone's stock to plummet. As a result of higher portfolio turnover, ESL Investments was not classified as a dedicated institutional investor starting in 2003.

Capturing the dynamic interests of principals changes our understanding of agency theory in at least two ways. First, it changes the nature of the agency problem. Agency theory has always suggested the agency "problem" of misaligned interests between shareholders and managers arises due to managerial opportunism. In their recent review of agency theory, Dalton et al. (2008: 1) note "the central tenet of agency theory is that there is potential for mischief when the interests of owners and those of managers

diverge." However, this dissertation adds that interests may diverge owing to problems with shareholders, not only managerial mischief. Agency theory assumes that shareholders have the best interests of the firm at heart, but these results demonstrate this is not always the case. Transient institutional investors clearly discourage firms from taking actions that may be important to the long-term health and success of the firm. Concerned more about short-term implications of strategic competitive actions, these investors don't appear to be concerned about the firm's long-term interests and stakeholders. Even dedicated institutional investors, although generally concerned with the firm's long-term competitiveness, have those interests taper off when they own significant portions of both a firm and its rival. The agency problem, therefore, is not only that managerial interests have gone awry but that principal interests may have done so. Agency theorists might suggest that owners may have whatever interests they desire, but in the context of firm governance scholars may need to consider how agency theory changes when owners can have destructive interests. As a result, agency theory in this context might address not only managerial opportunism, but principal opportunism as well.

Second, this study moves the focus of interest alignment from agents to principals. Agency theoretic prescriptions generally seek to align the interests of shareholders and managers via contracts and incentives imposed on the agent (Eisenhardt, 1989). This study, however, shows that principal interests are a moving target. The composition of a firm's ownership is not consistent over time, and in fact agents (i.e., managers) are a much more stable group. Therefore, to align the interests of shareholders and managers, the literature would benefit from more of a focus on

shareholders. For example, firms might "court" the right investors and in so doing attempt to gather a more consistent and homogenous group of owners. The voluminous research on agency theory operates almost exclusively from the perspective of aligning interests by changing how managers are monitored, compensated, or disciplined by the market (Dalton et al., 2008), Scholars have devoted little attention to how such mechanisms may be ineffective given that the interests of principals are dynamic. This study highlights the importance of the shareholder side of alignment, finding that shareholders are a heterogeneous and dynamic group with respect to what they are looking for out of firms in which they invest.

There are further implications for corporate governance that arise from this study. Prior research has found that firm owners play a role in establishing corporate-level strategies and are therefore an important dimension of corporate governance (e.g. Baysinger et al., 1991; Bethel & Liebeskind, 1993). The results reported here add that firm owners not only influence broad strategies but appear to be involved at a deeper level, influencing the extent to which firms undertake strategic actions. Institutional investors do not just occasionally direct firms in their portfolio to move in this or that overall direction, but instead appear to interact with firms regularly enough to affect their strategic competitive activity. This suggests that institutional investors understand and have opinions about firms in their portfolio at the behavioral level, and they impose those opinions on the firm's managers.

Competitive Dynamics

This study extends our understanding of competitive dynamics, and in particular of competition in dyadic rivalries. Rivalrous competition has garnered significant

research attention because firms have a single main competitor and share the same resource factor markets and general environments, thereby isolating external influences on competitive dynamics between the firms (Chen et al., 2007). Prior research has delineated the factors that make rivals more aware and more capable of competitive activity (Ferrier, 2001; Yu & Cannella, 2007), but this study adds an important factor that contributes to the firm's motivation to compete. The literature on what motivates firms to compete has generally focused on external factors, such as market commonality (Chen, 1996) and rival attack volume (Ferrier, 2001), with internal factors receiving less scholarly attention (Offstein & Gnyawali, 2005). This study has presented a number of factors of why governance structures may be a strong force influencing firms to compete or not compete. The results reported here confirm these arguments, showing that institutional investors are a powerful motivator, driving rivalrous firms to undertake, or not undertake, strategic competitive actions.

Another contribution to the literature on competitive dynamics from this research is the identification of an alternative mechanism for mutual forbearance. Strategic management and marketing researchers have developed the notion of mutual forbearance as tacit collusion between rival firms with the understanding that breaking the tacit agreement would bring harm to both firms together (Baum & Korn, 1996, 1999; Feinberg, 1984). Theorizing and empirical research on mutual forbearance has emphasized multimarket competition as the primary mechanism by which mutual forbearance occurs (Bernheim & Whinston, 1990; Gimeno, 1999). The results of this study point to the governance structure of firms in a rivalry as an alternative mechanism by which mutual forbearance may occur. In particular, results reveal the presence of an

inter-firm governance structure that emerges when dedicated institutional investors acquire large shares of both firms in a rivalry. Whereas governance researchers have established the influence of concentrated ownership on firms, this study finds evidence for the influence of common ownership on competition between firms.

Hypothesis 4 describes a phenomenon that is best understood using mutual forbearance arguments. However, this is not the same as finding evidence of collusion. It is important to recognize that the hypothesis states the influence of dedicated institutional investors is lessened when common ownership of the rival is high. We may view this as mutual forbearance in the sense that common ownership brings about reduced competitive activity between firms, but this does not at all suggest that firms actively pursue a program of tacit collusion or, worse, coordinated price increases. The mutual forbearance implications of this research are limited to the extent to which firm owners influence strategic competitive activity. This may simply reflect differences in the pressure that owners apply to each of the firms in turn, rather than any collusion on the part of firms that they own.

A final implication of this study for competitive dynamics researchers is that some owners may force firms into competitive myopia. Results indicate that transient institutional owners discourage strategic competitive activity, which is tantamount to limiting the range of competitive options available to firms. Transient investors use the threat of exit to pressure firms to consider only those competitive actions that would not result in short-term earnings shortfalls. As a result, managers in firms dominated by transient institutional investors do not have a full arsenal of competitive actions available to them. Over the long-term, the deck will be stacked against them. As they continually

strive to meet quarterly earnings expectations, their focus becomes increasingly narrow because they cannot consider the broad range of strategic actions that may be necessary for the firm to compete over time. This focus on a smaller range of actions means the firm will likely have less diversity in their competitive repertoire and be more predictable because they are unable to experiment with new forms of strategic competitive actions. Therefore, the short time horizon of transient institutional investors may have far-reaching implications for the breadth of a firm's competitive activity.

Implications for Practice

Institutional investors play a central role in the life of publicly traded firms. Many researchers have lauded the involvement of institutional investors, pointing to successes where such investors have influenced firms to undergo change that has turned around their performance (Dvorak & Lublin, 2008). Others, however, have argued that institutional investors lack governance skills (Prowse, 1991), suggesting the myopic concerns of shareholders makes them poor overseers of firm actions (Bushee, 1998). This dissertation helps evaluate the governance effectiveness of institutional investors, and has wide reaching implications for managers, directors, and shareholders.

"Management's primary obligation is to maximize shareholder value." This doctrine is instilled in business school students starting from their first management class and has gained secure status as a worthy explanation of the ultimate goal of managers. Until recent decades, this philosophy was more or less in sync with reality because owners held their shares for many years. However, the average shareholding period of institutional owners has been steadily declining (Villalonga & Amit, 2006). For the firms in this data set shares were held, on average, less than one year. Maximizing shareholder

value within the year is often inconsistent with maximizing long-term value for the firm. Managers, therefore, should recognize their primary obligation is to stakeholders whose interests coincide with long-term prospects of the firm. Instead, managers should consider how they might re-orient their objectives toward long-term value, and worry about maximizing shareholder value only when shareholders demonstrate they are serious about supplying patient capital.

Another implication for managers is that this study seems to indicate there are "right" and "wrong" investors. Common wisdom suggests that any investor is a good investor, but these results show that some investors will be better for the long-term health of a firm than others. Managers, therefore, may wish to take action to woo the right investors. There are some recent examples of firms trying to accomplish this. For example, Coca-Cola, PepsiCo, Gillette and AT&T have all stopped issuing quarterly earnings reports because management felt they were drawing attention away from long-term strategy (Bushee, 2004). Managers also might also consider the content of their public disclosures. To attract the right investors, managers might focus disclosure activity on information that helps investors monitor long-term prospects rather than earnings forecasts that may invite speculative trading from transient institutional investors.

Shareholders may find the results of this study useful in balancing their portfolio of firms. Dedicated institutional investors are unlikely to be surprised by results showing they influence the strategic competitive activity of firms. These investors often gain experience in turning around a particular type of firm. For example, Nelson Peltz's Trian Fund Management is a dedicated institutional investor that purchased large stakes in food industry firms Cadbury Schweppes and Kraft. Mr. Peltz leveraged his own experience in

the food industry to help each of these firms become more profitable. He was successful because the three companies each serve different niches within the food industry. However, such investors should realize that investing in firms that are in direct competition with each other will diminish their ability to govern, because helping one firm may have an opposing negative influence on another firm in their portfolio.

Public Policy and Societal Implications

The results of this study may also have important implications for public policy. Several Securities and Exchange Commission (SEC) regulations place limitations on the means by which institutional investors can impose pressure on firms in which they invest. Institutional investors have pressed for reforms to relax some of these standards with some success. This study shows that yielding greater leeway to the challenges institutional investors pose to firms may have mixed results, because institutional investors have varying motives. It is fair to ask, however, why SEC regulations should apply to all institutional investors as a group. Regulations could be drafted that address the needs of particular types of investors. For example, institutional investors that demonstrate their commitment to the long-term health of a firm by holding a significant number of shares over time might gain unique privileges with respect to their ability to influence firm actions.

This runs counter to the prevailing SEC philosophy, which sees the separation of shareholder power and managerial power as foundational to American capitalism. The governance of U.S. firms is built on the democratic system of one-share, one-vote, but this study suggests that such a system may not be as equitable as it sounds on the surface. Owners that purchase shares and intend to quickly release them at the first earnings

disappointment have the same voting power as those who have demonstrated commitment to the firm over time. This seems unfair to those who are trying to implement positive long-term change. There is little reason to provide the same power to influence firms to all owners. Perhaps the SEC need not consider such power to be a right conferred upon every owner, but rather a privilege doled out increasingly to owners as they show their interests are aligned with those of the firm. In this sense, recognizing the possibility of principal opportunism, the SEC would be using a reward system to bring the interests of owners in line with those of the firm.

The findings of this dissertation in support of Hypothesis 4 are also likely to be important to policymakers. SEC regulations do not currently regulate the impact of owning large shares of competitive rivals. This study shows there are implications to such forms of ownership as it diminishes the ability of otherwise good governance from institutional investors. Many SEC rules are based on agency theory, and this study adds that agents may not be acting independently of one another if they have a common principal. Recognizing this and regulating common ownership would place restrictions on an institutional investor's ability to invest in an entire industry, which would have particularly strong implications for funds that specialize in certain industries.

These results may even have broader implications for society at large. We often view firms as separate entities and have built our towns and cities around the notion that when firms compete, the public benefits. However, the visible network of competing firms belies a hidden structure of ownership that can influence the way these firms compete. This structure is both changing and non-obvious to consumers and individual investors. Walking into Circuit City in 2004, consumers might be alarmed to learn that

dedicated institutional investors owning more than 23% of the company also own large stakes in Best Buy. Perhaps of even more concern would be the high levels of common dedicated institutional ownership that exist between Cardinal Health and McKesson in the drug industry or between Aflac and Unum in insurance. In an age when investors were more passive, this kind of ownership structure may have been acceptable. However, given the increasing influence of institutional investors, common ownership could have a deleterious effect on the ability of capitalism to function as it should.

Limitations and Future Research

There are some limitations of note to this dissertation. In operationalizing competitive activity, it was necessary to leverage the commonly understood distinction between tactical and strategic competitive actions (Porter, 1980) because shareholders are more likely to affect strategic actions, and in fact may be unable to significantly affect tactical actions. While many empirical studies in the competitive dynamics literature recognize this distinction, they typically operationalize tactical, not strategic, competitive actions (Ketchen et al., 2004). The approach used here relies on the well accepted practice of headline searches of the business press using Lexis-Nexis (Derfus et al., 2008; Ferrier et al., 1999). I combined this with Smith et al.'s (1992) definition to identify those articles that describe strategic competitive actions and Chen and Macmillan's (1992) description of irreversibility to weight those actions. This resulted in a highly meaningful dependent variable that emerged from a broad view of the life of the firm over the sampling window, but it necessarily incorporates some judgments as to what constitutes a strategic competitive action and how irreversible is each action.

In addition, by using a dependent variable focused on competitive activity, this dissertation does not address the relative merits of implementing such activity. We may draw conclusions from the results about the extent to which owners influence firms to engage or not engage in strategic competitive activity, but those conclusions cannot be extended with respect to their ultimate influence on firm performance. Future research might consider the extent to which different types of shareholders benefit firms in their portfolio by fostering strategic activity that adds value.

The analysis presented here considered aggregate competitive activity of the focal firm as the dependent variable (i.e., annual count of strategic competitive actions). An important extension of this work will be to consider responses and response times of rival firms. Doing so would facilitate consideration not only of a firm's activity but also how governance structures facilitate or hinder the firm's ability to deter rival activity. In competitive dynamics research, initiation of competitive activity is an important dependent variable (Yu et al., 2007), but scholars might provide a more complete picture of the influence of institutional owners on the rivalry by examining how they affect the speed and diversity of firm responses. Another consideration with respect to the dependent variable is that the analysis of this dissertation concludes with strategic competitive activity. Future research might consider the ultimate outcomes of these strategic competitive actions. It would be interesting, for example, to delineate between strategic competitive actions initiated at the behest of institutional investors compared to those initiated by the firm and compare the long-term performance implications of these different types of actions.

Further, this study examined institutional owners and their portfolio of firms, but did not incorporate the historical experience of firm owners with respect to how they influence other firms in their portfolio. Future research may add this dimension to help explain the extent to which institutional investors learn from their ownership experience and, possibly, bring that knowledge to other firms in their portfolio. Actions taken by dedicated institutional investors such as Nelson Peltz and Robert Whitworth, who have encouraged considerable change in a variety of firms, provide anecdotal evidence of institutional investors leveraging their experience to place pressure on firms. As dedicated institutional investors have success turning around firms in their portfolio, they may seek out firms where they could leverage that experience. This may have positive results, or it may reveal the emergence of institutional investor hubris. Having successfully turned around the performance of one firm, institutional investors may seek to apply the same principles to other firms without fully understanding the context.

The sample was based on the large firms. Institutional investors are likely to be most concerned with the actions of the largest firms in their portfolio. However, there are rivalries in industries that do not include any Fortune 500 firms and the level of involvement of institutional owners may vary in such rivalries. In fact, there are also rivalries in very small and even emerging industries. The risks and rewards of strategic competitive activity in such industries are likely to be more pronounced, and therefore the role of institutional investors may change. Using SIC codes to delineate industries may also have hidden some common sense rivalries. For example, DirecTV and Echostar are obvious competitive rivals in the satellite television business, but SIC 4811is diluted by a variety of cable television providers.

The sample was also based on domestic firms. This facilitated analysis because ownership and board data were more readily available and competitive activity was easier to identify. However, multinational enterprises (MNEs) are likely to impose a host of different criteria on the hypothesized relationships. From an international perspective, institutional owners may be domestic or foreign, which would likely affect their ability to influence firm actions. MNEs vary in the extent of their globalization. As competitive rivals operate against each other in fewer global markets, it may be that common dedicated institutional ownership has less of a deleterious effect on firm governance. Future research could explore how MNE internationalization changes the way firm owners influence strategic competitive activity. A related line of research might also consider how institutional owners from other countries influence strategic competitive activity in the host country. Lastly, scholars might also examine the international nature of strategic competitive actions. For example, as institutional owners gain experience with investment in firms engaging in competitive activity overseas, do they bring that experience to other firms in the portfolio?

This study separately considers the influence of institutional investor types, but there are likely to be some important interactions between types. For example, in early 2008 Wellington Management and TCW Group, both dedicated institutional investors, each sold a 10% stake in Circuit City, one of the firms in the data set. Shortly thereafter one transient institutional investor, Maverick Capital, followed suit, selling its 5% stake while another transient institutional investor, D.E. Shaw, bought into a 3% stake. It is unclear how the entrance and exit of one type of investor influences other types of investors. However, such massive rotation of equity is likely to influence the ability of

the firm to compete and survive. Future research might examine how the movements of dedicated institutional investors affect actions by transient institutional investors and vice-versa, and how these work together to affect a firm's competitive posture.

A final avenue for future research might be to consider how firm ownership interacts with other forms of governance to affect strategic competitive activity. H3, which was not measured, could be analyzed by using a matched-pair analysis to capture those firms that do have directors with vested interests toward a specific institutional investor. These results could be expanded to examine how other aspects of the board of directors interact with the firm's owners to influence firm actions. For example, institutional owners may change the nature of the interlocking directorate and how it affects firm governance. Similarly, institutional ownership and executive compensation may work together to create particularly strong, or weak, governance structures. Different types of owners may also influence the effectiveness of the market for corporate control as a governance mechanism.

CHAPTER VI

SUMMARY

The present findings add value to our understanding of corporate governance, indicating that institutional investors can and do affect the strategic competitive actions of firms in their portfolio. Different types of investors are heterogeneous in their preferences and involvement in firm's strategic competitive activity. This study classified institutional investors based on their time horizons, trading sensitivity, and ownership stakes, focusing on two ends of the extreme: dedicated investors have concentrated stakes in a buy-and-hold strategy and transient investors have diversified holdings and higher turnover. Results show dedicated institutional investors foster strategic competitive activity whereas transient institutional investors appear to discourage it.

There are, however, factors that change the nature of these relationships. When the board of directors of the focal firm is more independent, dedicated institutional investors are better able to impose pressure on firms to engage in strategic competitive activity. On the other hand, when dedicated institutional investors own large stakes in both the focal firm and its rival, they lessen pressure to engage in strategic competitive activity. This points to an inter-firm governance structure that influences strategic competitive activity.

These results have broad implications for both theory and practice. For agency theory, this study demonstrates the dynamic nature of principal interests and shifts the source of the agency problem from managerial opportunism to principal opportunism.

For the competitive dynamics literature, the results presented here reveal a powerful motivating force on the competitive activity of firms and also introduce a new mechanism for mutual forbearance. Lastly, managers and policymakers alike will take interest in these results as they uncover important relationships governing the way rivals compete.

REFERENCES

Abarbanell, J. S., Bushee, B. J., & Raedy, J. S. 2003. Institutional investor preferences and price pressure: The case of corporate spin-offs. ***Journal of Business***, 76: 233-261.

Ahuja, G. & Katila, R. 2004. Where do resources come from? The role of idiosyncratic situations. ***Strategic Management Journal***, 25: 887-907.

Allison, P. D. 2005. ***Fixed effects regression methods for longitudinal data using SAS***. Cary, NC: SAS Publishing.

Amihud, Y. & Lev, B. 1981. Risk reduction as a managerial motive for conglomerate mergers. ***The Bell Journal of Economics***, 12: 605-617.

Axelrod, R. 1984. ***The evolution of cooperation***. New York, NY: Basic Books.

Barnett, W. P., Greve, H. R., & Park, D. Y. 1994. An evolutionary model of organizational performance. ***Strategic Management Journal***, 15: 11-28.

Baum, J. A. C. & Korn, H. J. 1996. Competitive dynamics of interfirm rivalry. ***Academy of Management Journal***, 39: 255-291.

Baum, J. A. C. & Korn, H. J. 1999. Dynamics of dyadic competitive interaction. ***Strategic Management Journal***, 20: 251-278.

Baysinger, B. & Hoskisson, R. E. 1990. The composition of boards of directors and strategic control: Effects on corporate strategy. ***Academy of Management Review***, 15: 72-87.

Baysinger, B. D., Kosnik, R. D., & Turk, T. A. 1991. Effects of board and ownership structure on corporate research-and-development strategy. ***Academy of Management Journal***, 34: 205-214.

Bebchuk, L. 2005. The case for increasing shareholder power. ***Harvard Law Review***, 118: 833-875.

Bernheim, D. & Whinston, M. D. 1990. Multimarket contact and collusive behavior. ***RAND Journal of Economics***, 21: 21-26.

Bethel, J. E. & Liebeskind, J. 1993. The effects of ownership structure on corporate restructuring. ***Strategic Management Journal***, 14: 15-31.

Bettis, R. A. & Weeks, D. 1987. Financial returns and strategic interaction: The case of instant photography. ***Strategic Management Journal***, 8: 549-563.

Bhagat, S. & Black, B. S. 2002. The non-correlation between board independence and long-term firm performance. ***Journal of Corporation Law***, 27: 231-273.

Boeker, W., Goodstein, J., Stephan, J., & Murmann, J. P. 1997. Competition in a multimarket environment: The case of market exit. ***Organization Science***, 8: 126-142.

Boyd, B. 1995. CEO duality and firm performance: A contingency model. ***Strategic Management Journal***, 16: 301-312.

Boyd, B., Gove, S., & Hitt, M. A. 2005. Consequences of measurement problems in strategic management research: The case of Amihud and Lev. ***Strategic Management Journal***, 26: 367-375.

Brickley, J. A., Lease, R. C., & Smith, C. W. 1988. Ownership structure and voting on antitakeover amendments. ***Journal of Financial Economics***, 20: 267-291.

Bushee, B. J. 1998. The influence of institutional investors on myopic R&D investment. ***The Accounting Review***, 73: 305-333.

Bushee, B. J. 2001. Do institutional investors prefer near-term earnings over long-run value? ***Contemporary Accounting Research***, 18: 207-246.

Bushee, B. J. 2004. Identifying and attracting the "right" investors: Evidence on the behavior of institutional investors. ***Journal of Applied Corporate Finance***, 16: 28-35.

Bushee, B. J. & Noe, C. F. 2000. Corporate disclosure practices, institutional investors, and stock return volatility. ***Journal of Accounting Research***, 38: 171-202.

Caves, R. E. & Porter, M. E. 1977. From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition. ***Quarterly Journal of Economics***, 91: 241-262.

Certo, S. T. & Semadeni, M. 2006. Strategy research and panel data: Evidence and implications. ***Journal of Management***, 32: 449-471.

Chen, M. J. 1996. Competitor analysis and interfirm rivalry: Toward a theoretical integration. ***Academy of Management Review***, 21: 100-134.

Chen, M. J. & Hambrick, D. C. 1995. Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. ***Academy of Management Journal***, 38: 453-482.

Chen, M. J. & Macmillan, I. C. 1992. Nonresponse and delayed-response to competitive moves: The roles of competitor dependence and action irreversibility. ***Academy of Management Journal***, 35: 539-570.

Chen, M. J. & Miller, D. 1994. Competitive attack, retaliation and performance: An expectancy-valence framework. ***Strategic Management Journal***, 15: 85-102.

Chen, M. J., Smith, K. G., & Grimm, C. M. 1992. Action characteristics as predictors of competitive responses. ***Management Science***, 38: 439-455.

Chen, M. J., Su, K. H., & Tsai, W. 2007. Competitive tension: The awareness-motivation-capability perspective. ***Academy of Management Journal***, 50: 101-118.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. 2003. ***Applied multiple regression/correlation analysis for the behavioral sciences***. Mahwah, NJ: Lawrence Erlbaum Associates.

Cool, K., Roller, L. H., & Leleux, B. 1999. The relative impact of actual and potential rivalry on firm profitability in the pharmaceutical industry. ***Strategic Management Journal***, 20: 1-14.

Daily, C. M. & Dalton, D. R. 1994. Bankruptcy and corporate governance: The impact of board composition and structure. ***Academy of Management Journal***, 37: 1603-1617.

Daily, C. M., Dalton, D. R., & Rajagopalan, N. 2003. Governance through ownership: Centuries of practice, decades of research. ***Academy of Management Journal***, 46: 151-158.

Dalton, D., Daily, C., Certo, S. T., & Roengpitya, R. 2003. Meta-analysis of financial performance and equity: Fusion or confusion? ***Academy of Management Journal***, 46: 13-26.

Dalton, D., Hitt, M. A., Certo, S. T., & Dalton, C. M. 2008. The fundamental agency problem and its mitigation: Independence, equity, and the market for corporate control. ***Academy of Management Annual Reviews***, 1: 1-64.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L. 1998. Meta-analytic review of board compostition, leadership structure, and financial performance. ***Strategic Management Journal***, 19: 269-290.

David, P., Bloom, M., & Hillman, A. 2007. Investor activism, managerial responsiveness, and corporate social performance. ***Strategic Management Journal***, 28: 91-100.

David, P., Hitt, M. A., & Gimeno, J. 2001. The influence of activism by institutional investors on R&D. ***Academy of Management Journal***, 44: 144-157.

Demsetz, H. & Villalonga, B. 2001. Ownership structure and corporate performance. ***Journal of Corporate Finance***, 7: 209-233.

Derfus, P. J., Maggitti, P. G., Grimm, C. M., & Smith, K. G. 2008. The red queen effect: Competitive actions and firm performance. ***Academy of Management Journal***, 51: 61-80.

Devers, C., Cannella, A. A., Reilly, G. P., & Yoder, M. E. 2007. Executive compensation: A multidisciplinary review and synthesis of recent developments. ***Journal of Management***, 33: 1016-1072.

Dushnitsky, G. & Lenox, M. J. 2005. When do incumbents learn from entrepreneurial ventures? Corporate venture capital and investing firm innovation rates. ***Research Policy***, 34: 615-639.

Dutton, J. E. & Jackson, S. E. 1987. Categorizing strategic issues: Links to organizational action. ***Academy of Management Review***, 12: 76-90.

Dvorak, P. & Lublin, J. S. 2008. Boards give up taming act, Wall Street Journal, Vol. April 7.

Eisenhardt, K. M. 1989. Agency theory: An assessment and review. ***Academy of Management Review***, 14: 57.

Ettore, B. 1996. When patience is a corporate virtue. ***Management Review***, 85: 28-32.

Evan, W. N. & Kessides, I. N. 1994. Living by the "golden rule:" Multimarket contact in the U.S. airline industry. ***Quarterly Journal of Economics***, 109: 341-366.

Falkenstein, E. G. 1996. Preferences for stock characteristics as revealed by mutual fund portfolio holdings. ***Journal of Finance***, 51: 111-135.

Fama, E. F. 1980. Agency problems and the theory of the firm. ***Journal of Political Economy***, 88: 288-307.

Feinberg, R. M. 1984. Mutual forbearance as an extension of oligopoly theory. ***Journal of Economics and Business***, 36: 243-249.

Ferrier, W. J. 2001. Navigating the competitive landscape: The drivers and consequences of competitive aggressiveness. ***Academy of Management Journal***, 44: 858-877.

Ferrier, W. J. & Lee, H. 2002. Strategic aggressiveness, variation, and surprise: How the sequential pattern of competitive rivalry influences stock market returns. ***Journal of Managerial Issues***, 14: 162-180.

Ferrier, W. J., Smith, K. G., & Grimm, C. M. 1999. The role of competitive action in market share erosion and industry dethronement: A study of industry leaders and challengers. ***Academy of Management Journal***, 42: 372-388.

Filatotchev, I. & Toms, S. 2006. Corporate governance and financial constraints on strategic turnarounds. ***Journal of Management Studies***, 43: 407-433.

Galbraith, J. R. & Kazanjian, R. K. 1986. ***Strategy implementation: Structure, systems and process***. St Paul, MN: West Publishing.

George, G., Wiklund, J., & Zahra, S. A. 2005. Ownership and the internationalization of small firms. ***Journal of Management***, 31: 210-233.

Gillan, S. L. & Starks, L. T. 2007. The evolution of shareholder activism in the United States. ***Journal of Applied Corporate Finance***, 19: 55-73.

Gilson, R. J. & Kraakman, R. 1991. Reinventing the outside director: An agenda for institutional investors. ***Stanford Law Review***, 43.

Gimeno, J. 1999. Reciprocal threats in multimarket rivalry: Staking out 'spheres of influence' in the US airline industry. ***Strategic Management Journal***, 20: 101-128.

Gimeno, J. & Woo, C. Y. 1996a. Economic multiplexity: The structural embeddedness of cooperation in multiple relations of interdependence. ***Advances in Strategic Management***, 13: 323-361.

Gimeno, J. & Woo, C. Y. 1996b. Hypercompetition in a multimarket environment: The role of strategic similarity and multimarket contact in competitive de-escalation. ***Organization Science***, 7: 322-341.

Gimeno, J. & Woo, C. Y. 1999. Multimarket contact, economies of scope, and firm performance. ***Academy of Management Journal***, 42: 239-259.

Golden, B. R. & Ma, H. 2003. Mutual forbearance: The role of intrafirm integration and rewards. ***Academy of Management Review***, 28: 479-493.

Greve, H. R. 2003. A behavioral theory of R&D expenditures and innovations: Evidence from shipbuilding. ***Academy of Management Journal***, 46: 685-702.

Grinstein, Y. & Michaely, R. 2005. Institutional holdings and payout policy. ***Journal of Finance***, 60: 1389-1426.

Hambrick, D. C., Cho, T. S., & Chen, M. J. 1996. The influence of top management team heterogeneity on firms' competitive moves. ***Administrative Science Quarterly***, 41: 659-684.

Hartzell, J. C. & Starks, L. T. 2003. Institutional investors and executive compensation. ***Journal of Finance***, 63: 2351-2374.

Hermalin, B. E. & Weisbach, M. S. 2003. Boards of directors as an endogenously determined institution: A survey of the economic literature. ***Economic Policy Review***, 9: 7-26.

Higgins, M. C. & Gulati, R. 2006. Stacking the deck: The effects of top management backgrounds on investor decisions. ***Strategic Management Journal***, 27: 1-25.

Hilbe, J. M. 2007. ***Negative binomial regression***. New York, NY: Cambridge University Press.

Hillman, A. J. & Dalziel, T. 2003. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. ***Academy of Management Review***, 28: 383-396.

Hirschman, A. O. 1970. ***Exit, voice, and loyalty***. Boston, MA: Harvard University Press.

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. 2007. ***Strategic management: Competititveness and globalization*** (7th ed.). Cincinnati, OH: South-Western College Publishing.

Hoskisson, R. E., Hitt, M. A., Johnson, R. A., & Grossman, W. 2002. Conflicting voices: The effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies. ***Academy of Management Journal***, 45: 697-716.

Hsu, G. C. M. & Koh, P. S. 2005. Does the presence of institutional investors influence accruals management? Evidence from Australia. ***Corporate Governance: An International Review***, 13: 809-823.

Jensen, M. C. & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. ***Journal of Financial Economics***, 3: 305.

Johnson, J. L., Daily, C. M., & Ellstrand, A. E. 1996. Boards of directors: A review and research agenda. ***Journal of Management***, 22: 409-438.

Johnson, R. A. & Greening, D. W. 1999. The effects of corporate governance and institutional ownership types on corporate social performance. ***Academy of Management Journal***, 42: 564-576.

Karmel, R. S. 2004. Should a duty to the corporation be imposed on institutional shareholders? ***The Business Lawyer***, 60: 1-21.

Karnani, A. & Wernerfelt, B. 1985. Multiple point competition. ***Strategic Management Journal***, 6: 87-96.

Ke, B. & Petroni, K. 2004. How informed are actively trading institutional investors? Evidence from their trading behavior before a break in a string of consecutive earnings increases. ***Journal of Accounting Research***, 42: 895-927.

Kesner, I. F. 1987. Directors stock ownership and organizational performance: An investigation of Fortune 500 companies. ***Journal of Management***, 13: 499-507.

Ketchen, D., Snow, C. C., & Hoover, V. L. 2004. Research on competitive dynamics: Recent accomplishments and future challenges. ***Journal of Management***, 30: 779-804.

Kirzner, I. 1973. ***Competition and entrepreneurship***. Chicago, IL: University of Chicago Press.

Kochhar, R. & David, P. 1996. Institutional investors and firm innovation: A test of competing hypotheses. ***Strategic Management Journal***, 17: 73-84.

Lane, P. J., Cannella, A. A., & Lubatkin, M. H. 1998. Agency problems as antecedents to unrelated mergers and diversification: Amihud and Lev reconsidered. ***Strategic Management Journal***, 19: 555.

Lee, H., Smith, K. G., Grimm, C. M., & Schomburg, A. 2000. Timing, order and durability of new product advantages with imitation. ***Strategic Management Journal***, 21: 23-30.

Lerner, J. 2005. The new new financial thing: The origins of financial innovations. ***Journal of Financial Economics***, 79: 223-255.

Long, J. S. & Freese, J. 2006. ***Regression models for categorical dependent variables using Stata***. College Station, TX: Stata Press.

Macmillan, I., McCaffery, M. L., & Vanwijk, G. 1985. Competitors responses to easily imitated new products: Exploring commercial banking product introductions. ***Strategic Management Journal***, 6: 75-86.

Mallette, P. & Fowler, K. L. 1992. Effects of board composition and stock ownership on the adoption of poison pills. ***Academy of Management Journal***, 35: 1010-1035.

Marquis, C. 2003. The pressure of the past: Network imprinting in intercorporate communities. ***Administrative Science Quarterly***, 48: 655-689.

Mas-Ruiz, F. J., Nicolau-Gonzalbez, J. L., & Ruiz-Moreno, F. 2005. Asymmetric rivalry between strategic groups: Response, speed of response and ex ante vs. ex post competitive interaction in the Spanish bank deposit market. ***Strategic Management Journal***, 26: 713-745.

Miller, D. & Chen, M. J. 1994. Sources and consequences of competitive inertia: A study of the United States airline industry. ***Administrative Science Quarterly***, 39: 1-23.

Miller, D. & Chen, M. J. 1996. The simplicity of competitive repertoires: An empirical analysis. ***Strategic Management Journal***, 17: 419-439.

Mills, K. 2002. Pillsbury deal expenses cut into General Mills bottom line. ***The Associated Press***, March 20.

Mizruchi, M. S. 1983. Who controls whom? An examination of the relation between management and board of directors in large Amercian corporations. ***Academy of Management Journal***, 8: 426-435.

Neubaum, D. O. & Zahra, S. A. 2006. Institutional ownership and corporate social performance: The moderating effects of investment horizon, activism, and coordination. ***Journal of Management***, 32: 108-131.

Offstein, E. H. & Gnyawali, D. R. 2005. CEO compensation and firm competitive behavior: Empirical evidence from the U.S. pharmaceutical industry. ***Journal of Engineering and Technology Management***, 22: 201-225.

Parrino, F., Sias, R., & Starks, L. T. 2003. Voting with their feet: Institutional ownership changes around CEO turnovers. ***Journal of Financial Economics***, 68: 3-46.

Penner-Hahn, J. & Shaver, J. M. 2005. Does international research and development increase patent output? An analysis of Japanese pharmaceutical firms. ***Strategic Management Journal***, 26: 121-140.

Perks, H. & Halliday, S. V. 2003. Sources, signs, and signalling for fast trust creation in organisational relationships. ***European Management Journal***, 21: 338-350.

Porac, J. F. & Thomas, H. 1990. Taxonomic mental models in competitor definition. ***Academy of Management Review***, 15: 224-240.

Porac, J. F., Thomas, H., Wilson, F., Paton, D., & Kanfer, A. 1995. Rivalry and the industry model of Scottish knitwear producers. ***Administrative Science Quarterly***, 40: 203-227.

Porter, M. E. 1980. ***Competitive strategy: Techniques for analyzing industries and competitors***. New York, NY: Free Press.

Porter, M. E. 1992. ***Capital choices: Changing the way America invests in industry***. Boston, MA: Harvard Business School.

Pound, J. 1988. Proxy contexts and the efficiency of shareholder oversight. ***Journal of Financial Economics***, 20: 237-265.

Prowse, S. D. 1991. Comments on the changing role of institutional investors in the financial and governance markets. In A. W. Sametz & J. L. Bicksler (Eds.), ***Institutional investing: Challenges and responsibilities of the 21st century***: 48-56. Homewood, IL: Irwin Press.

Raheja, C. G. 2005. Determinants of board size and composition: A theory of corporate boards. ***Journal of Financial and Quantitative Analysis***, 40: 283-306.

Ramaswamy, K., Li, M. F., & Veliyath, R. 2002. Variations in ownership behavior and propensity to diversify: A study of the Indian corporate context. ***Strategic Management Journal***, 23: 345-358.

Schumpeter, J. 1934. ***The theory of economic development***. Cambridge, MA: Harvard University Press.

Schwab, S. & Thomas, R. 1998. Realigning corporate governance: Shareholder activism by labor unions. ***Michigan Law Review***, 96: 1018-1094.

Shimizu, K. & Hitt, M. A. 2004. Strategic flexibility: Organizational preparedness to reverse ineffective strategic decisions. ***Academy of Management Executive***, 18: 44-59.

Shrout, P. E. & Fleiss, J. L. 1979. Intraclass correlation: Uses in assessing rater reliability. ***Psychological Bulletin***, 86: 420-428.

Simon, H. A. 1957. ***Administrative behavior: A study of decision-making processes in administrative organization***. New York: MacMillan.

Sinha, R. 2004. The role of hostile takeovers in corporate governance. ***Applied Financial Economics***, 14: 1291-1305.

Smith, K., Ferrier, W., & Ndofor, H. 2001. Competitive dynamics research: Critique and future directions. In M. A. Hitt ,R. E. Freeman & J. S. Harrison (Eds.), ***Handbook of strategic management***: 315-361. Oxford, UK: Blackwell Publishers.

Smith, K. G., Grimm, C., Chen, M., & Gannon, M. J. 1989. Predictors of response time in competitive strategic actions: Preliminary theory and evidence. ***Journal of Business Research***, 183: 245-259.

Smith, K. G., Grimm, C. M., Gannon, M. J., & Chen, M. J. 1991. Organizational information-processing, competitive responses, and performance in the United-States domestic airline industry. ***Academy of Management Journal***, 34: 60-85.

Stephan, J., Murmann, J. P., Boeker, W., & Goodstein, J. 2003. Bringing managers into theories of multimarket competition: CEOs and the determinants of market entry. ***Organization Science***, 14: 403-421.

Sundaramurthy, C. & Lewis, M. 2003. Control and collaboration: Paradoxes of governance. ***Academy of Management Review***, 28: 397-415.

Sundaramurthy, C. & Lyon, D. 1998. Shareholder governance proposals and conflict of interests between inside and outside shareholders. ***Journal of Managerial Issues***, 10: 30-44.

Taylor, W. 1990. Can big owners make a big difference? ***Harvard Business Review***, 68: 70-82.

Tihanyi, L. & Ellstrand, A. E. 1998. The involvement of board of directors and institutional investors in investing in transition economies: An agency theory approach. ***Journal of International Management***, 4: 337-351.

Tihanyi, L., Johnson, R. A., Hoskisson, R. E., & Hitt, M. A. 2003. Institutional ownership differences and international diversification: The effects of boards of directors and technological opportunity. ***Academy of Management Journal***, 46: 195-211.

Tuschke, A. & Sanders, W. G. 2003. Antecedents and consequences of corporate governance reform: The case of Germany. ***Strategic Management Journal***, 24: 631-649.

Villalonga, B. & Amit, R. 2006. How do family ownership, control, and management affect firm value? ***Journal of Financial Economics***, 80: 385-417.

Wernerfelt, B. & Karnani, A. 1987. Competitive strategy under uncertainty. ***Strategic Management Journal***, 8: 187-194.

Wiersema, M. F. & Bantel, K. A. 1992. Top management team demography and corporate strategic change. ***Academy of Management Journal***, 35: 91-121.

Wright, P., Ferris, S. P., Sarin, A., & Awasthi, V. 1996. Impact of corporate insider, blockholder, and institutional equity ownership on firm risk taking. ***Academy of Management Journal***, 39: 441-463.

Wu, S. B., Levitas, E., & Priem, R. L. 2005. CEO tenure and company invention under differing levels of technological dynamism. ***Academy of Management Journal***, 48: 859-873.

Yoffie, D. B. & Cusumano, M. A. 1999. Judo Strategy. ***Harvard Business Review***, 77: 71-84.

Young, G., Smith, K. G., Grimm, C. M., & Simon, D. 2000. Multimarket contact and resource dissimilarity: A competitive dynamics perspective. ***Journal of Management***, 26: 1217-1236.

Yu, T. & Cannella, A. A. 2007. Rivalry between multinational enterprises: An event history approach. ***Academy of Management Journal***, 50: 665-686.

Zahra, S. A. 1996. Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities. ***Academy of Management Journal***, 39: 1713-1735.

Zahra, S. A., Neubaum, D. O., & Huse, M. 2000. Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. ***Journal of Management***, 26: 947-976.

VITA

Name:	Brian L. Connelly
Address:	Auburn University College of Business 415 W. Magnolia Ave. Auburn, AL 36849
Education:	B.S., Electrical Engineering, Rutgers University, 1987 M.S., Electrical Engineering, Johns Hopkins University, 1994 M.B.A., General Management, Indiana University, 2004 Ph.D., Texas A&M University, 2008